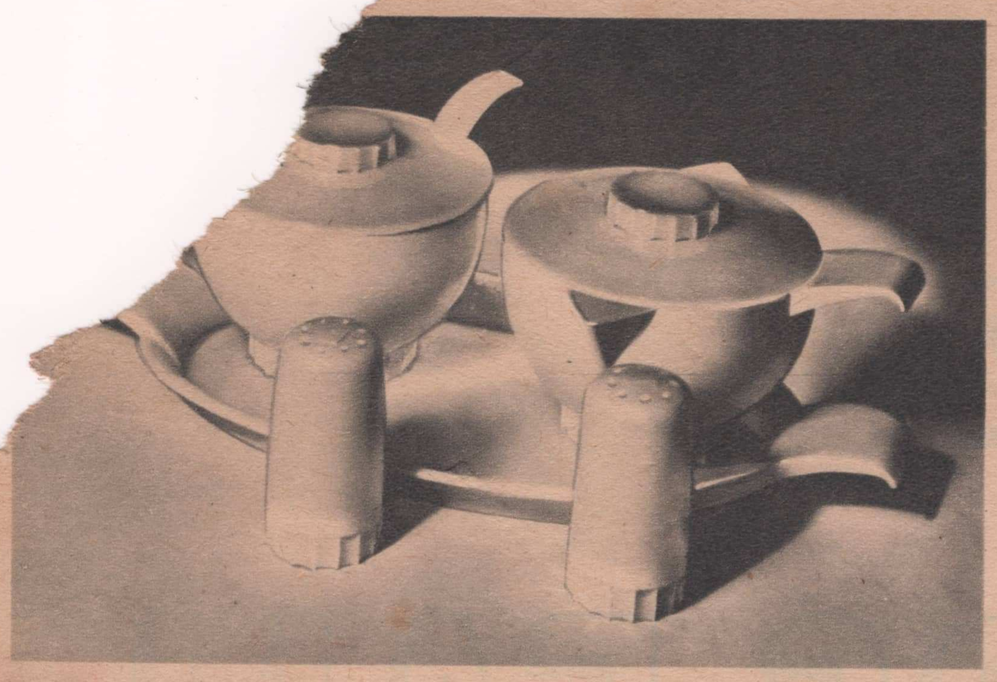
What to Do
IF A-BOMBS FALL

This guide is printed by The Inquirer as a public service. Its purpose is to explain, in a sensible way, how you can best protect yourself, your family, your community, and your country in the event of atomic bombing. You, as a cooperative unit, are America's best defensive weapon.

Today The Philadelphia Inquirer Magazine
SECTION OF FEBRUARY 11, 1951



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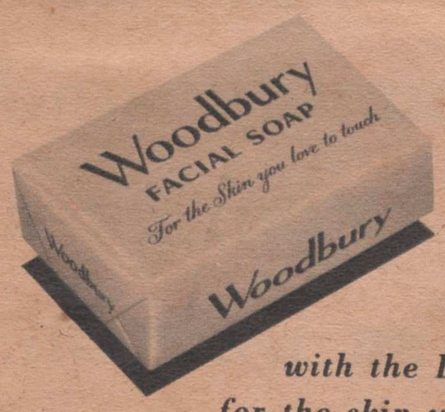

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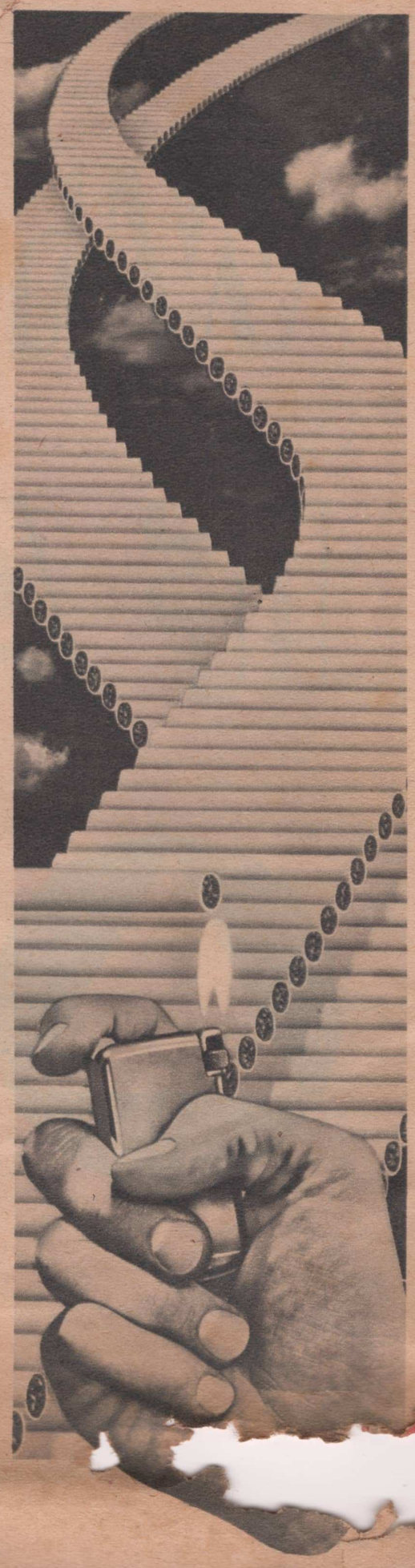
IT'S EVERYBODY'S JOB

CIVIL defense, like freedom, is everybody's job. Yesterday and today the state has its first warning system test, and on Tuesday Philadelphia will hold its first full-scale air raid drill. Following the drill the County Defense Council will announce its plans for auxiliaries. Detailed requirements of skills needed, and where and when you may volunteer will be published in The Philadelphia Inquirer. Watch for these announcements and then offer your services where they will do the most good. In the meantime the word is: Stand by!



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If you feel qualms about the possibilities of an atomic raid, remember that great-grandma faced and conquered critical situations.

Let's Talk It Over

A word to the women . . .

BY JOHN M. McCULLOUGH

EVEN if your local Civil Defense Council has not yet appealed to women to enlist for training and service in one of the specialized branches, **there is a great deal that women can do NOW.**

If you will only think about some of the problems I am going to suggest, you will be helping to build a firmer foundation under the unit without whose whole-hearted support and intelligent co-operation the best civil defense plan ever written will fail.

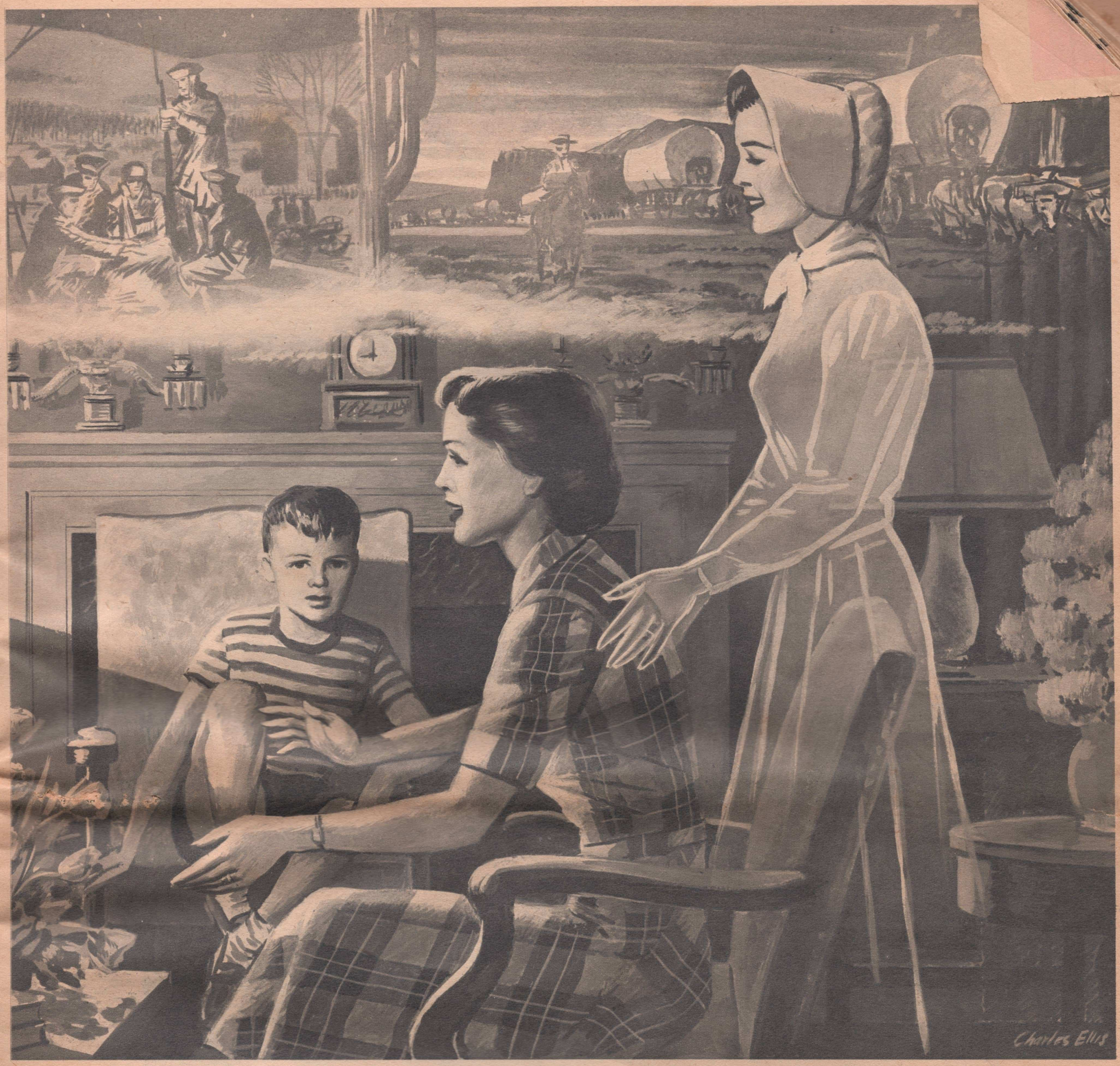
That unit is the family—and you, the housewife, are its Chief of Staff. There are a number of problems you can solve now by calm, quiet planning which may save time and confusion and tragedy later on. Fortunately, they are not very different from the problems you wrestle with every day.

In fact, there is no better time than right now for reviving an old family custom which has been all but lost in our modern living. I refer to the family council.

I suggest that some evening when the children have no homework, and your husband has no lodge meeting or workshop puttering, you say something like this:

"There is a possibility that something might happen which would place us just where our pioneer forefathers were. We wouldn't have all these nice conveniences of heat and gas and electric light; we wouldn't have any refrigerator or oil burner. If we turned on the spigot, no water would come out. We couldn't drive to the store, because the roads would be crowded with people with much more important business than ours. Now, let's see what we could do to make out for a while without all those nice things."

You don't have to mention the atomic bomb; no more than your great-grandmother had to go into detail about Indians and forest fires and pestilence. If you think it will disturb the children—and it probably won't, for they are getting some sound training themselves in their school—forget the atom bomb. An Indian war party, armed with tomahawks, scalping knives and fire arrows, was just as terrible to your great-grand-



mother's generation as the threat of atomic warfare is to ours.

Now, put these questions before your family council:

1. What things can't we do that we usually do if we have no light, heat or power? Remember, now: no electricity, no electric range, no refrigerator, no deep freeze unit. No gas. Possibly, no water from the spigot, certainly no hot water and therefore no automatic washer.

2. What do we do if we don't have them? What kind of food can we eat? How can we keep warm? How can we cook? What do we do about water? What sort of clothes should we have for this emergency?

I am not going to answer the questions for you here. Some answers are given in other articles in this magazine. However, I would rather you wouldn't read the answers until you have done some thinking about *your own answers*. There *are* answers.

All right, then, let's ask some more questions:

3. How capable am I—or are we, if you're directing the question to the family council—of taking care of our injuries? Remember: no power, possibly no telephone, and your doctor will have an emergency station, so it's up to you. You're on your own. What do you know about first aid? Is there a basic first aid kit in your house? Toss that one at your husband or, even better, at your Boy Scout son. It will test their male responsibility—and demand a full report at the next meeting of the family council. You are the Chief of Staff, so exert your authority.

4. How about fire? Yes, fire might be a problem. As a matter of fact—and if you don't realize it, you certainly should—fire always is a problem in the home. Remember: no water, no garden hose, no telephone, no fire company to come with howling sirens to take the job on its broad shoulders.

Again, you're on your own. What conditions in your house would feed a fire? Rubbish in the cellar or the attic? Inflammable liquids in confined spaces? Toy chests and closets jammed helter-skelter with combustible odds and ends? There is another good chance to get the masculine members of your household busy. How many odds and ends of completely useless paint does your husband have squirreled away in his basement workshop? How about turpentine and paint-soaked rags? There never was a painter-husband who didn't have some. And that pile of newspapers and department store cartons? And matches in every drawer?

5. Do you know where the master electric, gas and oil burner switches are in your home? If you're like many women, you leave matters of that kind to your husband. You are simply terrified when it comes to changing a fuse—just as terrified as the average husband would be if he suddenly were commanded to do the shopping for and prepare a full-course dinner. I'm not going to tell you what to do or what not to do about the electric, gas and oil burner switches. You will be told; but find out where they are and how they work. Ask your husband; he'll love it.

6. How many people, in addition to yourself and your family, could you shelter and feed during an emergency period of, let's say, two days? Well, there's that old army cot in the attic; and that mattress you've been intending to give to the Salvation Army, and . . . but I said I wouldn't answer questions. Put your mind to it. People who desperately need food and shelter don't need lull-me-to-sleep mattresses and *filet mignon* smothered in mushrooms. You may even have to shove some of your personal niceties out the window. You would, if homeless humans appealed to your heart, so think about it now.

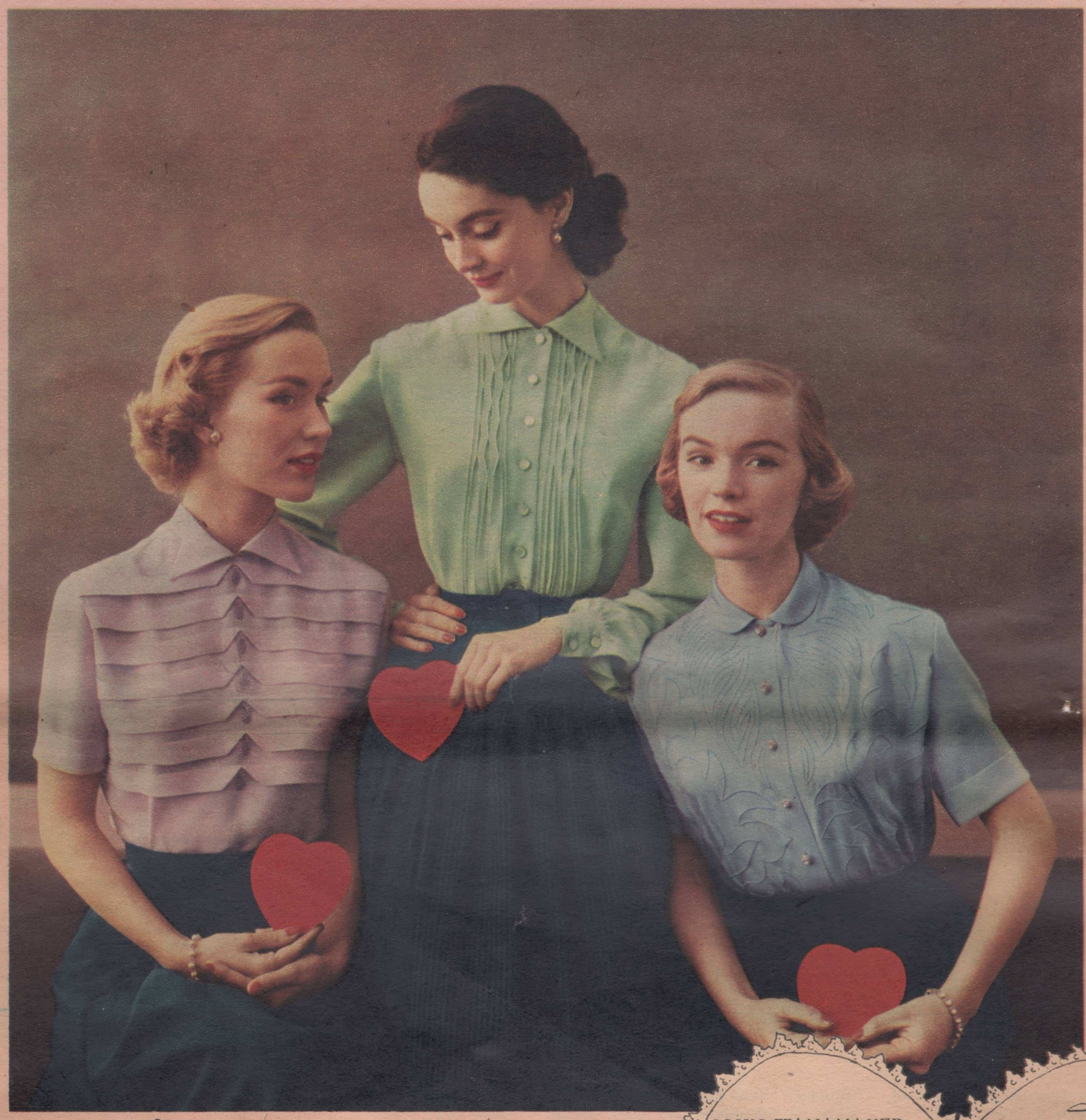
I could go on, asking questions all day long, but I think that is enough to keep you busy for a while. Be honest with yourself, but don't become panicky. If, in spite of all your effort to be calm, you find yourself slipping into foreboding, stop a moment and listen very carefully. I think that you will hear a chuckle—a sweet, soft chuckle, and perhaps even the touch of a toil-hardened hand on your shoulder. And then a whisper:

"Bless your heart, my dear, chirk up. This is your great-grandma. I went through all of this. Now, a smile on your pretty face; let's get our heads together."

John Wanamaker

valentines in bloom

JUDY BOND RAYON TISSUE FAILLE BLOUSES IN FLOWER PASTELS



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We Are Now In Training

BY MAJ. GEN. NORMAN D. COTA, U. S. A. (RET.)
Director, Philadelphia County Defense Council

Civil defense decontamination squad will be important in testing for continuing radioactivity near areas where bombs are dropped.

Fire watchers will be alert to direct crews to major blazes.

Emergency communication equipment will be available.

Workers at central information centers will quickly chart areas affected by bombs so emergency measures can be properly organized.

TWO days from now, an enemy attack with atomic bombs will be made on Philadelphia. You know, of course, that the attack is "hypothetical." You might wish to call it "phony." No bombs really will be dropped. There will be no wailing of air-raid sirens. There will be no blinding flashes, no explosions.

But, whether you realize it or not, the attack and the manner in which Philadelphia is able to solve it are as vital to your welfare—possibly to survival—as the next breath you draw.

You want to know why. I am going to tell you.

Back in 1939, 1940 and 1941, I was an officer on active duty with the United States Army. In the early months and years of that period, we had no more to work with than Philadelphia has today. Everything was hypothetical. We used stove-pipes for artillery; trucks for tanks; wooden guns for rifles. A great many people called that training "phony," too.

Training Helped Win War

But that "phony" training, those "hypothetical" problems, helped us win the Second World War. Hand-painted signs and wooden guns in the swamps of Louisiana and the pine-barrens of the Carolinas won the battles of the Normandy beaches, smashed the Siegfried Line.

If we had had *real* guns, *real* tanks, the troops of those early divisions which we were putting together so desperately would have learned their lessons better, and would not have had the casualties they did sustain.

We did the best we could with what we had—and *we won.*

For just about four months, a small army of busy men and women has been sacrificing their leisure hours, their holidays, their week-ends, their evenings of relaxation, in the sober, unspectacular job of putting together a plan of civil defense to meet and whip an enemy attack on their city. They have been more badly handicapped, in many ways, than those of us in the Army were in '39. Planning and training an army was our job. We had done it before.

Civil Defense a Big Job

Planning the civil defense of a community such as Philadelphia against an attack with modern weapons is staggering in its magnitude and complexity. Almost nothing that even the most experienced civilian has learned can prepare him for it.

What organized medical group, however competent, can readily adjust its thinking to a plan to care for a third of a million casualties, for instance? What peacetime fire-fighting force can visualize the tactics and strategy of hemming in fires which create hurricane-like draughts, engulfing possibly a tenth of the entire area of the city? What welfare organizations, however efficient, ever were required to think in terms of providing food, clothing, shelter, registration and medical and spiritual aid for hundreds of thousands of men, women and children—made homeless in a minute or so?

All that these civil defense planners, whom I have had the honor to direct under the authority of Mayor Samuel, possessed was a sense of real urgency and a spirit of dedication to their task.

We are doing the best we can with what we've got. Can we win? I think we can. Even if an enemy attack were actually to occur on Tuesday, we would not be wholly helpless. As Director of Public Safety Samuel Rosenberg pointed out a few weeks ago, we have an army of well over 20,000 police and firemen, Park Guards, auxiliary police and firemen and air raid wardens.

Army Growing Day by Day

The army is growing, hour by hour and day by day. More and more men and women are realizing that this is serious business—possibly the most serious that Philadelphia, as an organized community, ever has put its hand to. Civil defense is not merely an amusing civilian game of "playing soldier." It is grim business.

If an incident were to occur tomorrow, I again say, we would not be helpless. But even if every resource of this city were organized, if every physically able man and woman were enlisted and trained, it still would not be enough.

Next Tuesday's test is important not only to the people living in the 128 square miles of Philadelphia County. It is important to the people of our whole area: just as important to Newtown or Lansdale as it is to Norristown or Phoenixville or West Chester; just as important to Kennett Square, or West Grove, or Oxford, as it is to Trenton or Camden or Atlantic City.

"All for One, One for All"

No one knows where disaster might strike. Bombardiers still make errors. At the altitudes and speeds at which modern bombing planes must operate, an infinitesimal error in bombing can mean missing a target by miles. For that reason, the concept of civil defense is "all for one, one for all."

Now, just one word on enlistment in the civil defense forces of this city. For every volunteer now on the rolls, we need 100. I believe that at least half a million men and women, both those too young and those too old for military duty, must be recruited, trained and equipped if we are going to win our own municipal "Battle of the Bulge."

Some will need only basic, more or less elementary training. On the basis of the American National Red Cross goal of 20,000,000 persons trained in basic first aid, Philadelphia's quota should be not less than 400,000. Philadelphia's share of the national quota of 1,000,000 nurses' aides is certainly not less than 30,000.

Some of the training will be given in special Federal and State schools and some of it will be intensive. Men, and very possibly women, must be trained for light rescue duty, for bearing litters, for communications duty, for operating all sorts of light and heavy motor vehicles.

When the public fully realizes what is at stake in civil defense, I have no fear whatever of the response. We are a peace-loving people, but we have a fighting heritage. We never have failed to deliver all that was asked in courage, in sacrifice and in grinding labor when the chips were down. But time—it may be only days or weeks, for all that anyone really knows—is priceless today. A thousand civil defense volunteers today are worth 10,000 six months from now.

I have one word of advice and caution which may seem to contradict that very statement, but it is important and I want to make it crystal-clear. If you have young children, or if there are aged or ailing parents or relatives in your household, you already *have* a civil defense job. You are on the civil defense roster. It is taking care of them. You can do it better and more sympathetically than a dozen volunteers. Your job is planning how to care for the ill or the defenseless in your own household if disaster strikes. There is plenty of literature to tell you in detail and in simple language what to do and how to do it. Get it, read it, and then plan the job of your household defense.

Tuesday's hypothetical attack and its solution represent merely initial phases in planning and training that may be a part of the duty of our citizens for the indefinite future.

There is some job, with your name on the label, waiting to be filled.

NOW ANYONE CAN MAKE PERFECT PIECRUST!

New "Water-Whip" Pastry Method

HOMOGENIZED SPRY'S GREAT NEW DISCOVERY

Read how this newest, easiest way to perfect piecrust saves time—saves work!

Women everywhere are thrilled at this newest cooking miracle made possible by Homogenized Spry! Clip the recipe below and make a pie the "Water-Whip" way today! Discover for yourself, there's no more bother with "cutting in" your shortening! No guesswork about how much liquid to add! And you'll get the flakiest, tenderest, nut-sweet piecrust you ever ate. Only Homogenized Spry brings you this amazing new method! So, get Homogenized Spry in the blue gingham can today. See for yourself why women are calling it the miracle of modern shortenings!

"It really works—I tried it!"

"I admit I was skeptical," says Mrs. A. S. VanBuskirk of Belle Harbor, N. Y., mother of four young pie lovers. "But it really works! And I'll be using the Spry 'Water-Whip' Piecrust Method from now on. It's so much easier—and it can't fail!"

1 MAKE SPRY "WHIP!" *Just whip Homogenized Spry with liquid!* With a fork, whip or beat boiling water and a little milk into Homogenized Spry until the mixture is smooth and thick like whipped cream. So quick and easy! This is the key step that makes this method so successful, possible only with such a miracle shortening as Homogenized Spry.

2 JUST SIFT! *Sift flour and salt right onto the creamy Spry "Whip."* No tedious cutting in of shortening. No guesswork about how much liquid to use or how to add it! It's another miracle of Homogenized Spry. The right amount of water is properly distributed in the Spry "Whip" and you get tender, flaky piecrust every time. It's easy and quick, even a child can make it!

3 READY IN A JIFFY! *Stir quickly into ball of dough!* With round-the-bowl strokes, stir into a dough that clings together and "cleans" the bowl. It takes only 33 seconds to blend flour with the Spry "Whip" and form dough. It's a well-blended pliable dough—easy to handle and roll in your regular way, or between waxed paper. Try Spry's "Water-Whip" Piecrust Method.

EASIEST, SUREST PIECRUST EVER!

HOMOGENIZED SPRY'S "Water-Whip" Piecrust Recipe

REMEMBER: Don't try this with your old shortening. Use only Homogenized Spry—*in the blue gingham can*—the only type of shortening that mixes properly with liquid.

INGREDIENTS:

- ¾ cup Homogenized Spry
- ¼ cup boiling water
- 1 tablespoon milk
- 2 cups sifted all-purpose flour
- 1 teaspoon salt

TO MIX: Put Homogenized Spry in medium-sized mixing bowl. Pour on boiling water and milk, and whip or beat with fork until smooth and thick like whipped cream. Tilt bowl, use rapid cross-the-bowl strokes. Sift flour and salt onto Spry mixture. Stir quickly with round-the-bowl strokes, into a dough that "cleans" the bowl. Shape into a smooth, flat round. Roll as desired. Pastry for 9-inch, 2-crust pie.

Another Cooking FIRST from

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All Spry now at your grocers is Homogenized Spry.

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Another fine product of Lever Brothers Company

The Red Alert Means Hit the Dirt!

BY STEVE BLAND

IF AN air-raid siren could talk, it would cry out to you:

"Take cover . . . get under shelter . . . hit the dirt!"

Taking cover is one of the most fundamental and useful instincts of the animal kingdom, and it isn't a bad one for human beings in this Atomic Age.

The rule holds true, whether it is a hurricane, a violent electric storm or an atom bomb you are dodging.

Two months ago, the Federal Civil Defense Administrator, former Governor Millard Caldwell, made public a recommended nation-wide system of air-raid signals.

This system now is standard in Philadelphia, New Jersey, New York, New England and most of the other States of the country.

There are two public signals: the "red alert," the public sound signal that an enemy attack may be expected within a few minutes, and the "all clear," the public sound signal that imminent danger has passed.

RED ALERT: this signal is a wavering, or fluctuating sound, lasting for three minutes on a siren. The alternating pitch might be represented graphically like this:

O-O-O- O-O-O-
O-O-O- O-O-O

If the signal is given on a horn or whistle, it also is of three minutes' duration. But it will consist of a 10-second blast, a two-second silence, repeated in cycle for three minutes, like this:

Ten-second sound—two-second silence—sound—silence.

ALL CLEAR: a series of three steady, one-minute blasts by horns, sirens and whistles, interrupted by silent periods of two minutes each. That is, the all clear will require a total of seven minutes, thus:

One-minute sound—two-minute silence—sound—silence—sound

Philadelphia is not strictly following FCDA's directives simply because the system, comprising 248 powerful sirens, is not yet completely installed, although it will be within a relatively short time.

Until the system is complete—and that means one siren for about every half square mile of the city's 128 square miles of area—any air-raid signal will be amplified by these added means:

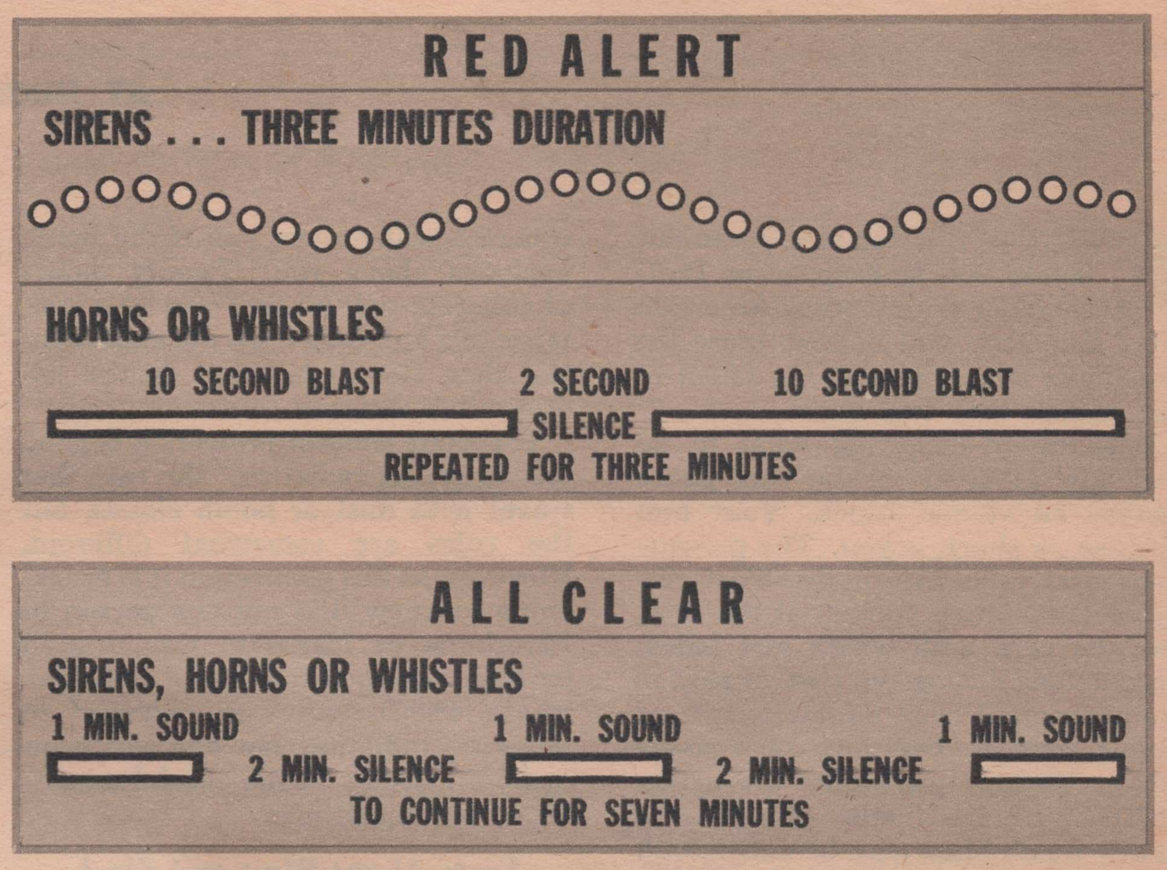
Radio announcement.

TV announcement—(by voice).

Horns, sirens and whistles of industrial establishments.

A fleet of 34 police loudspeaker radio cars, which will broadcast the same pre-arranged announcements as are coming over your radio or television set.

The best official information that FCDA and the U. S. Air Force can give the public now is that sounding of the red alert—the fluctuating signal—means that enemy planes are about eight minutes from their bomb release point. If the bomber is flying at 500 miles an hour, that would mean that it is about as distant from Philadelphia as Lancaster or Beach Haven.



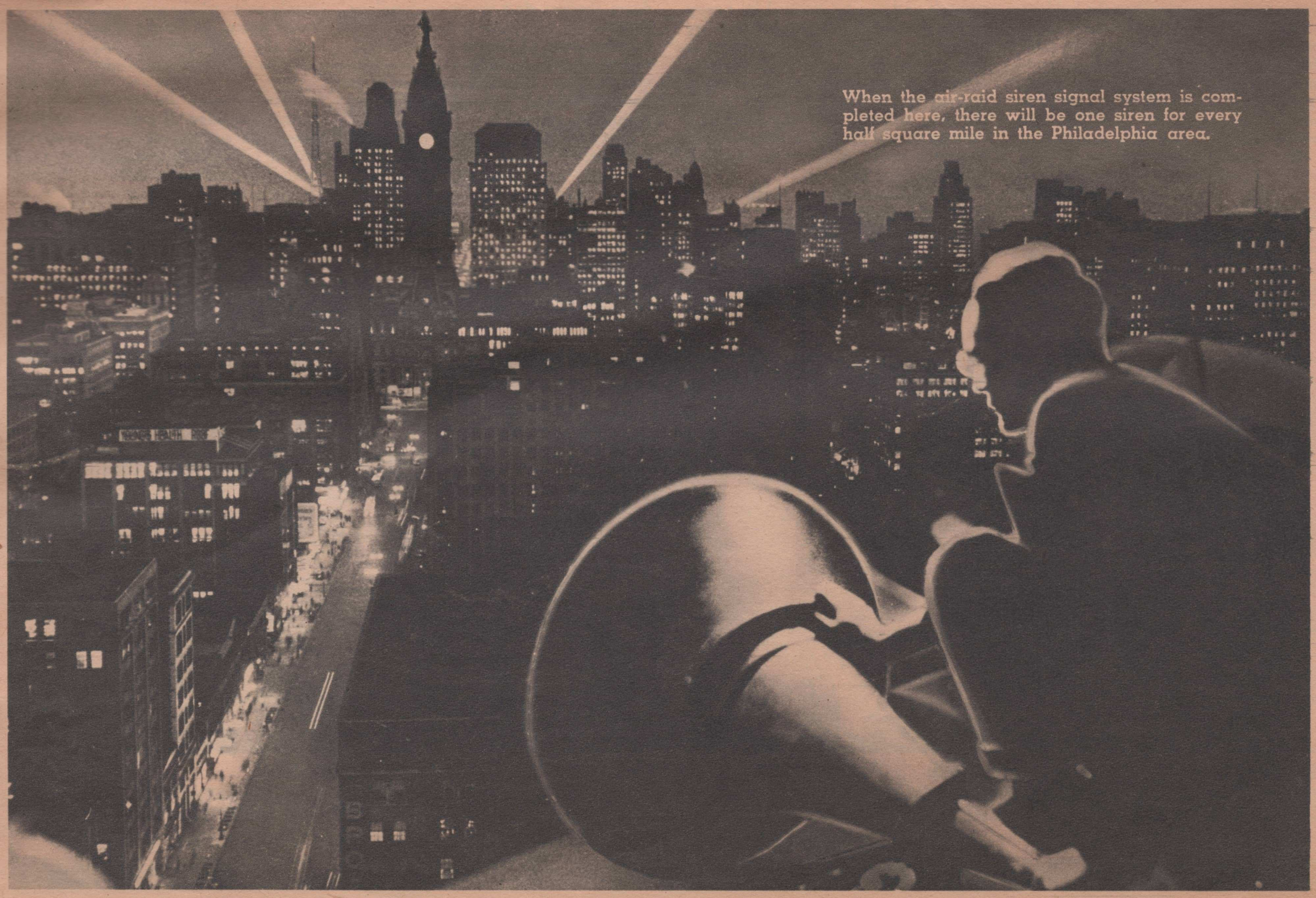
"Red alert" siren may be the first warning you have of an atomic attack. It is part of your duty to learn these warning signals.

A great many people ask: "How is it possible for an enemy plane to approach within 65 miles of Philadelphia all of the way from some Asiatic base? That's silly. Don't we have fighter planes, radar, anti-aircraft? Do you mean to tell me that it is possible for an enemy plane to cross that much of the United States without being shot down?"

That is exactly what the U. S. Air Force has been patiently, stubbornly hammering into the public's mind since 1945.

It has been telling anyone who would listen—and, at first, not too many listened, unfortunately—that it is impossible to stop every plane of a determined, powerful and shrewdly launched heavy bombardment raid. No such raid in force ever was stopped during the Second World War by any defending force.

It COULD HAPPEN here. The red alert COULD SOUND right here, in Eastern Pennsylvania, New Jersey or Delaware. Public tests of the signal system are planned. It is a part of your duty to learn them—and not to forget them.


When the air-raid siren signal system is completed here, there will be one siren for every half square mile in the Philadelphia area.

Your Best Defense Is You

BY HUGH SCOTT

EVERYONE hopes that no atomic bombs will be dropped on Philadelphia or any other American city. But hope will neither erase the possibility nor minimize the effect of any attack that may come.

Preparation—knowing what to do and how to do it—is the best guard against an atomic attack. Your best defense, in short, is you. The precautions you take before the blast, the speed with which you act at the time, and the care with which you follow instructions during the post-explosion danger period will do more toward saving your life than any other single factor. With proper public instruction and training, the number of casualties in any bomb blast may be cut in half.

No one wants to spread butterfly-like optimism over a possible atomic bomb attack. Yet the horror-house erected on the unsubstantial sands of unofficial report and rumor deserves to be demolished. Actually, the atomic bomb is no more than a bigger-than-ever explosive force with the added danger of radiation, the effects of which have been exaggerated.

Fatal Only at Close Range

These rays, which can't be seen or felt, will kill you if you are close to the explosion and unprotected. But if you are more than a mile and a half from the explosion, the immediate radiation will be harmless even if you have no protection. Too, unless you get a lethal dose, you will have a very good chance of survival. Radiation won't make you permanently bald; it won't give you cancer; it won't make you permanently unable to have children. It won't make the ground permanently unfit for plant life; it won't "pass into your body" if you touch a person affected by an overdose, nor will it "stay in your body forever."

There are definite rules to be followed in order to guard against radiation. The danger from immediate radiation lasts about 90 seconds. During that period, the more protection you have, the better your chance. Any fairly thick wall or dirt bank which is between you and the explosion helps stop the rays. Thirty-six inches of concrete will protect you if the bomb explodes above you. Twenty inches of concrete will protect you at a distance of a half mile from the explosion; less than two inches will do the job at a mile's distance.

The same general protection is good for "lingering radiation," the rays that travel with dust or bomb clouds, but the rules are somewhat different. However, in this connection it is heartening to know that not one person in Hiroshima or Nagasaki was injured by lingering radiation. Too, at Bikini, where 42,000 men were exposed to lingering radiation, not one was even made ill, thanks to the careful supervision of trained men.

Facts About Blast and Flash

Apart from radiation, the atomic bomb has two destructive forces, its blast and its heat flash. These are much the same as those of ordinary bombs, except that they are of greater magnitude. Generally the blast will be responsible for 55 percent of all injuries; the heat flash will account for about 30 percent, and the radiation only 15 percent.

The blast will affect the greatest area, doing serious damage up to two miles from the explosion, and light damage, such as breaking windows, up to eight miles from the explosion. The heat flash may extend for five miles from the center of the explosion, but its effects should be minor at a distance of more than two miles.

This heat flash lasts only about three seconds and can be stopped by heavy cardboard, heavy clothing, or even by a shadow. Light colored clothing is better than dark as the heat tends to bounce off it; loose-fitting clothing, leaving an air space between it and the skin, is better than tight clothing. Sleeves should always be rolled down; hats—the wider the brim the better—should always be worn.

The chances of a bomb being dropped without an air raid warning are slight. However, if your first warning is the flash, drop flat, face down and with your arms around your head and your hands tucked in. If possible, roll into a gutter or to the side of a building, keeping your face as well protected as possible.

If you're in a car, turn off the motor, put on the brakes and get as low as you can, face down. If you're in a building drop flat under some protection like a table, if possible. In any case, get down fast; seconds count.

Normally, however, you should have an average of eight minutes between the first air raid warning, the Red Alert, and the explosion. In Philadelphia, as elsewhere, the Red Alert will be a three-minute fluctuating signal on sirens. On horns and whistles, the signal will consist of ten-second blasts interrupted by two seconds of silence. The All Clear Signal will be a steady blast for one minute, repeated three times, with two minutes of silence between blasts.

If no attack follows the Red Alert, you can come out from shelter and go about your business when the All Clear sounds. But if there is an attack, and if you don't have any immediate Civil Defense duties, you should stay in the best protected place until you are advised by radio or some other public announcement to leave.

Cellar Best Place in Home

The best protected place in the average home is in the cellar. But before going to the cellar, or to a possible bomb shelter, or to the basement of a public building, there are certain things you should do—if time allows. First, if you are in a private home, close all doors and windows. Pull down shades; shut the open fireplace damper; if you have a coal-burning furnace, close all fuel and draft doors, and do all you can to put out or cover open flames. Shut off the switch to your oil burner; turn off all cooking flames in stoves,

Don't try to turn off the pilot light or the main intakes to any gas fueled furnaces, water heaters or refrigerators. *Don't* pull the master electric switch that controls all current to your home. If you cut off the gas in this way, it may take months before the utility company can get it back into service; if you pull the main electric switch, you will have no power for radio, which should keep you informed. The utility companies will cut off all gas or electricity from any section that is badly blasted by a bomb.

At home, in your basement, you should have the following supplies: a flashlight, a radio (battery-operated if possible), a first aid kit, and a small supply of canned goods. Drinking water, some blankets, and perhaps a cot and chair or two may ease things. But here, as in every other department of atomic bomb safety, no rule can be completely inflexible.

Lie Flat on Your Face

A single, inflexible rule, however, is to lie flat on your face with your face, and whole head if possible, covered. In the cellar, lie close to an outside wall, as the center of your home is more likely to collapse. In an office, get under a desk or table, or, if arrangements have been made, go to a basement or a set of central inside fire stairs. If you're on the street when the Red Alert sounds, go to your home or place of business and lie down in the place already selected; if this is impossible, go to the nearest public building and get to the lowest and best protected place in it.

If your children are in school when the Red Alert sounds, leave them there. They'll be better off than the average person outside. (See Page 12.) Don't phone schools or relatives; you'll just jam the wires.

Don't try to leave a city or town just before or after a bomb raid. You're really safer where you are, and if any large group of people tries to move out, the panic will be almost as disastrous as another explosion.

Very few persons are able to build a private bomb shelter and stock it with necessities. If even one-tenth of the families in the nation followed this idea the materials and labor required would be more disruptive to the national economy than ten atomic bomb explosions. You can, however, reinforce a corner of your cellar.

This above all—try to keep calm. Panic can be one of the most dangerous factors in any bomb attack. Keep your head; it may save your life.

'SNEAK ATTACK'—NO WARNING SIREN

DO THIS FAST ↓

WHEN YOU HEAR SIREN

DO THIS ↓

AT HOME

Get under bed or table close to the wall and **AWAY** from windows.

Cover exposed parts of body and close eyes tightly.

Draw window drapes—close blinds or shutters.

Extinguish all open flames or fires.

Go to basement or other previously selected shelter.

AT WORK

Get under desk, table or bench.

Lie close to wall away from windows or glass doors.

Cover exposed parts of body and close eyes tightly.

Go to shelter designated for your floor.

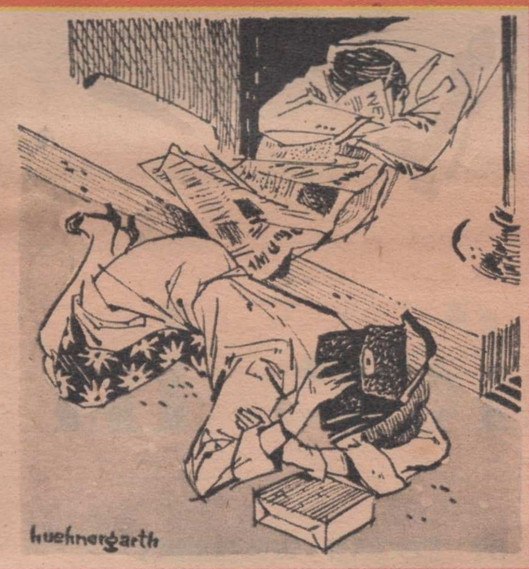
Obey building instructions.

Obey floor warden.

OUT WALKING

Take any shelter if within a few steps.

If no shelter near—fall to ground, face downward, cover exposed parts of body, close eyes tightly.



Go to nearest public shelter or enter nearest building—stay near center of building away from windows.

Subways may also afford protection.

Obey warden's instructions.

IN VEHICLE

Pull into curb, stop, turn off ignition. Cover face and eyes and fall to floor.

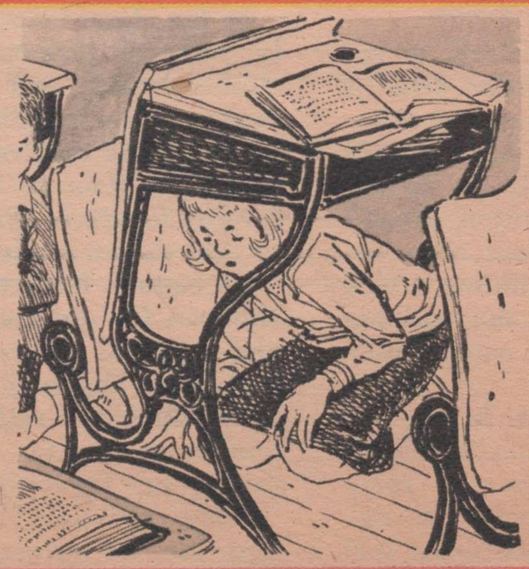
Park immediately at curb, away from corners and hydrants.

Enter public shelter or nearest building—stay near center of building away from windows.

Obey warden's instructions.

CHILDREN AT SCHOOL

If your children are at school, **YOU** stay at home. Don't phone—teachers are trained to care for the students.



If your children are at school, **YOU** stay at home. Don't phone—teachers are trained to care for the students.

They're Safer in School

BY EDGAR WILLIAMS

SHOULD an atomic attack come while your child is in school, be calm. Chances are he'll be better protected than you are.

Don't attempt to go to the school, either when the air raid warning sounds or after the explosion has occurred. For one thing, the wardens won't permit you to be in the streets; and even if you could reach the school, you would only be in the way.

Don't try to telephone the school. Telephone lines must be kept clear for essential defense purposes. Suppose the parents of each of Philadelphia's 350,000 school children called up after an attack to check on their offspring's welfare—every telephone exchange would be hopelessly jammed.

You'll worry, of course. That's just being human. But your anxiety should be assuaged by the knowledge that your child not only will be well protected but, by virtue of a training program now in progress, will be prepared for almost any eventuality.

This is what will happen in all of the city's public, parochial and private schools in the event of a raid during school hours:

The "red alert," signalizing imminent enemy attack, will be flashed from Philadelphia Civil Defense Council headquarters to the signal room of the Board of Public Education Administration Building. From there, a telephone relay system will transmit the warning to public school district superintendents, the office of the superintendent of the Catholic Diocesan Schools and the office of the headmaster of Friends Select School.

By pre-arranged relay systems, each public school district superintendent will notify the schools under his jurisdiction. Similar relays will carry the alert to the Diocesan schools from the office of their superintendent. The relay warning for the private schools will originate at Friends Select. Every school in the city can be alerted in less than five minutes.

Go to Retention Areas

As soon as the "red alert" is received in a school, "retention drill" is called with six short rings on classroom, basement and yard bells. Pupils and teachers immediately go to assigned stations in "retention areas": hallways on the lower floors, other interior portions of the building which have no windows, or—if the building is of monolithic concrete construction—the basement.

The pupils will remain in the retention areas until after the "all clear" message, transmitted via the relay network, has been received. The signal for the return to classrooms will be three long rings on classroom bells.

No pupil will be released from school until word is received from the authorities that it's safe to go outside.

Most schools are holding at least two retention drills weekly at present, will continue this schedule until the time consumed between reception of the "red alert" and the arrival of all pupils at their designated positions in the retention areas is less than five minutes.

Let's see how a typical school operates during a retention drill:

The "red alert" is flashed to the Thaddeus Stevens School, Spring Garden st., west of 13th. In the principal's office, the retention drill signal—the six short rings of the bells—is sounded.

In the classrooms, the pupils quickly retrieve jackets and coats from clothes-hooks and return to their desks. The clothing will come in handy if the children are required to sit on the floor in the retention area for any length of time; a folded jacket or coat makes a tolerably good seat.

At signals from their teachers, the children file quietly out of the rooms and walk to the retention area—the first floor hallways. Each teacher takes the class roll book to the retention area to make check-ups throughout the drill.

"The children," says David P. Bruestle, the principal, "are required to be as quiet as possible during the drill. Not that we try to stifle them, but I think we have impressed on them the fact that undue excitement can have a harmful effect at such times."

Certain pupils are assigned to messenger duties to facilitate communications between various parts of the retention area. Some teachers and older pupils are assigned to administer first aid, when and if needed. Other teachers are prepared to conduct entertainment programs.

These programs usually take the form of group singing, story telling and games requiring little movement. The idea is to make retention as pleasant an experience as possible.

Teamwork Is Stressed

The custodian of the building sees to it that the lighting and heating systems function as usual, makes certain that fire fighting equipment is easily accessible, and closes all doors and windows. The school secretary registers any persons who may enter the building for shelter.

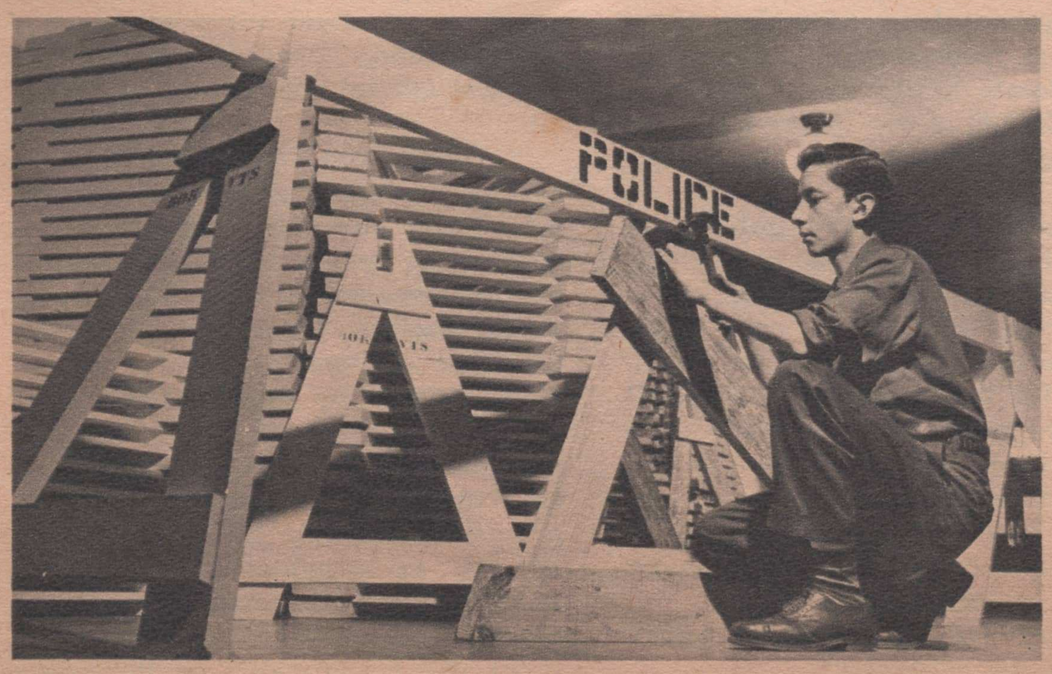
"It's a team proposition," Bruestle says. "Every person in the building plays a part."

In the over-all preparations for defense the schools are playing a big part. Students in the school shops are constructing 1000 street barriers for use by the Police Department. A plan is being evolved whereby students from senior high and vocational-tech-

(Continued on Page 14)

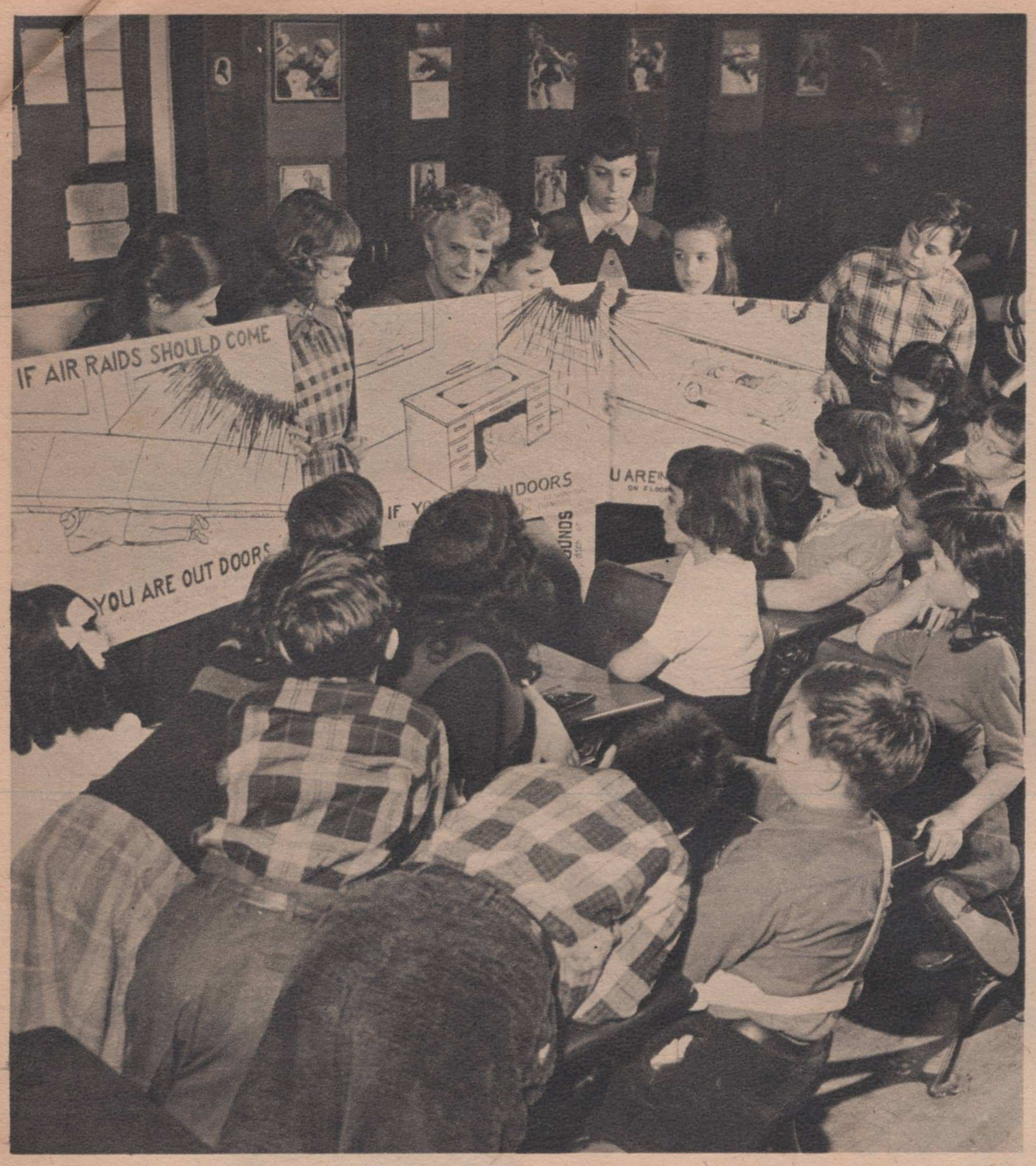
During an atomic raid drill in school, first grade teacher Catharine Kelley diverts her pupils by holding flute class.

In the event of a raid, pupils in all Philadelphia schools will be given food and shelter, will be kept entertained.



Bok Vocational School pupil Albert Nardy puts the finishing touches on a street barrier for use by the Police Department.

Older school pupils are taught emergency first aid for their classmates, helping them to reach the temporary school hospital and retention areas.



Sixth grade teacher Emma MacIlvain instructs her pupils in atom bomb defense measures for use during a raid when pupils are not in school.

School nurse, Mrs. Nadya Yanov, demonstrates first aid to 6th graders Marvin Levin, William Washington, William Flacker, Walter Sullivan.

As the "red alert" is flashed from the control center, Mrs. Henrietta Cooper, school secretary, sounds six short rings for retention drill.

Registering for emergency work at Stevens School. From left are Mrs. Mildred Knoght, Mrs. Daniel Blumberg, teacher Mrs. Phoebe Griffith.

(Continued From Page 12)

nical schools, under the leadership of their teachers, would aid the neighborhood wardens in rescue work, demolition and debris clearance. These groups would include students who are familiar with the use of automobile or other type jacks, metal and wood cutting tools, welding torches and electrical equipment.

Every School a Shelter

Some 450 buildings from the city's school systems have been designated as shelters, medical centers and evacuation points in the event of emergency. In 125 of the larger buildings emergency hospitals will be established.

Remember this—every public and parochial school building in the city is a shelter. If you need help, go to the nearest school—but only when you're certain that it's safe to travel.

Plans for the emergency use of all these structures must be made on a 24-hour basis. A school's faculty and janitors cannot be expected to remain on duty around the clock. Many of these people, in fact, may reside many miles away from their schools.

So what will happen if an attack comes at, say, midnight?

Once again, it's a matter of teamwork. "General control personnel," recruited from the school and the area it serves, will operate the building if a raid occurs after school hours.

Most of these people live in the immediate neighborhood of the school. They're housewives, ministers, truck drivers, merchants—responsible citizens, banded together to do a job.

They will keep the power and heating plants in operation; make school facilities—including the cafeteria—available to evacuees; provide registration and information services; promote morale building (through personal and spiritual aid, particularly); issue clothing, if needed, and provide medical aid (of the first aid type).

Shop Facilities Available

Shop facilities, if any, within the school will be made available to the community to aid in the rehabilitation of damaged homes. Such work, when feasible, would be under the direction of members of the school staff, assisted by persons residing in the vicinity of the school.

Specialized services, such as broad-scale care of the sick and injured, possible evacuation to other sections of the city or to suburban points, and security (law enforcement, traffic control and protection against sabotage) will be provided by the agencies established for such purposes by the Civil Defense Council.

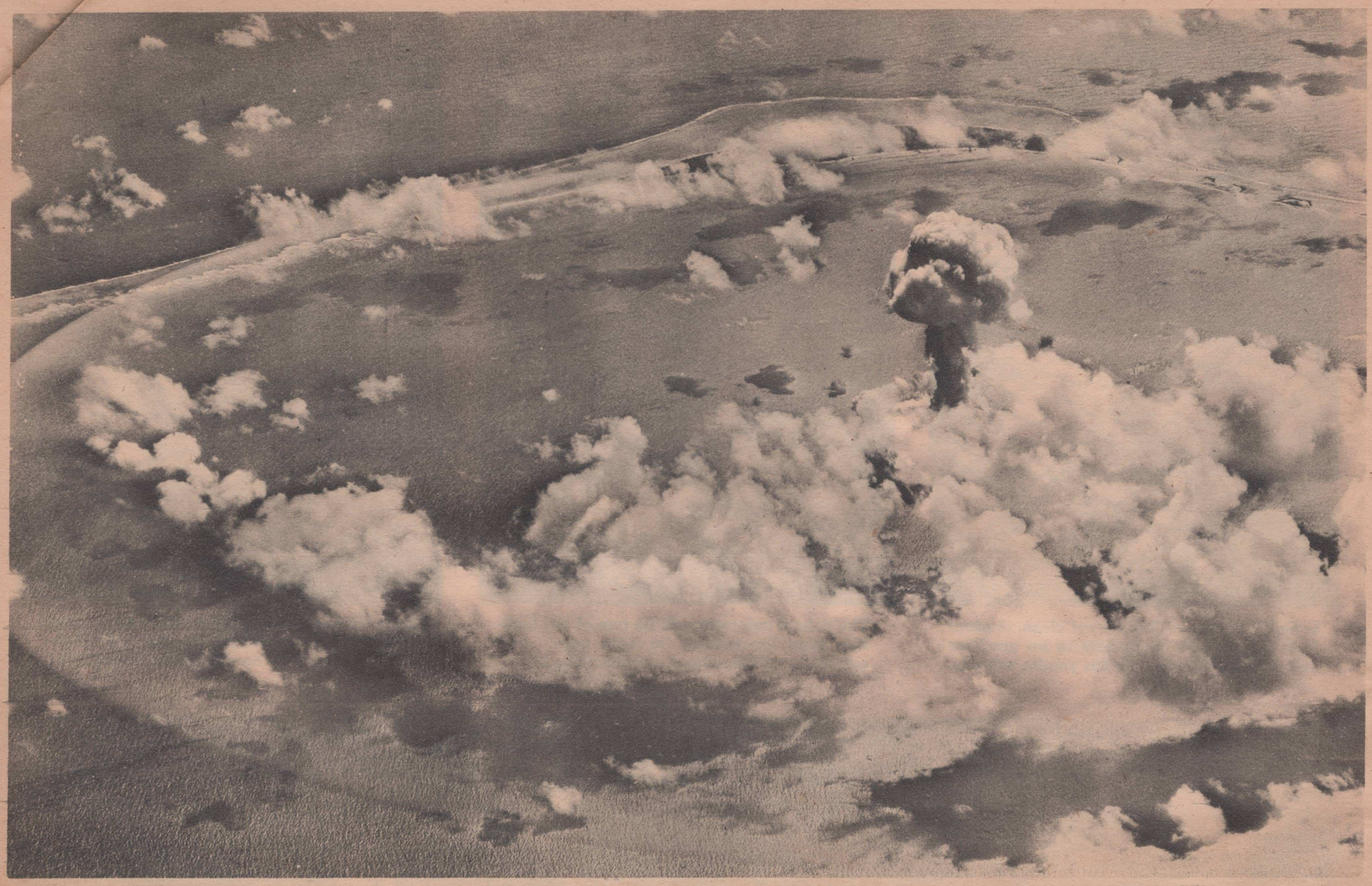
IF YOU ARE INDOORS
DROP TO FLOOR IMMEDIATELY, WITH BACK TO WINDOWS.
CRAWL UNDER DESK, TABLE, BED OR FURNITURE
IF AIR RAIDS SHOULD
DOORS
OVER HEAD AND HANDS

In Bok Vocational School art class, student Joan Fink works on posters to be used for instruction purposes in the public schools.

The school cafeteria will be one of the facilities kept functioning for both pupils and evacuees of the school neighborhood.

Boys familiar with wood-cutting tools, such as these Bok School pupils, will aid neighborhood wardens as well as the Police Dept.

Science instructor Lawrence M. Silk uses a map to explain to students the complete destructive area of an atom bomb bursting in mid-Philadelphia.



Shock wave, traveling at 1000 miles an hour, is clearly seen at left in this picture of the air-bursting atom bomb at Bikini.

How the Atom Bomb Works

BY JOHN M. McCULLOUGH

A BEGINNER'S course in nuclear physics is not necessary in order to understand the connection between a possible enemy attack upon your community with atomic weapons and civil defense organization.

That part of a community which knows exactly how and why an atom bomb explodes isn't going to be one bit better off, so far as the effects of that explosion are concerned, than those in the community who don't know a gamma ray from a velocipede.

It is interesting to know why an atom bomb explodes, if you have the time and the inclination to devote to it, but that knowledge isn't going to help you survive when it does.

"Where" Is Important

However, there are certain things—and they're not mysterious at all—about *where* an atom bomb explodes which have become part of the ABC's of civil defense. Some civil defense instructions which otherwise may seem puzzling really make sense when this "where" of the bomb explosion is understood.

The effects of an atomic bomb differ rather sharply, depending upon where it explodes. For the sake of simplicity, the "where" has been divided into three aspects:

1. An explosion in the air.
2. An explosion in the water.
3. An explosion underground.

That shouldn't cause any difficulty at all. *Any* bomb, whether it is a hand grenade or a block-buster, has different effects upon its target if it explodes in mid-air, if it explodes in water or if it penetrates the ground and then explodes.

Furthermore, as far as *you* are concerned, the atom bomb at half a mile is no different, if you're an unprotected target, than a shotgun blast at ten feet. Both will kill you.

When *any* bomb explodes, whether it is made of Uranium-235, TNT or black powder, certain things happen instantly, and they are the *same* things.

When *any* bomb explodes, it gives off blast, heat and certain fragments of its own structure. Those are instantaneous effects.

It hardly seems necessary to point out that, since the atom bomb is a very much more violent explosive than any yet devised, these instant effects are comparably more violent.

Blast, of course, is as old as explosion. The very hot gases released by the explosion—whether it's chemical, as in the TNT bomb, or nuclear, as in the atom bomb—exert a tremendous pressure against the surrounding atmosphere. The rush of this compressed air to expand causes the violent "blast wave" in atomic explosion of which, quite properly, you have heard so much. A 4000-pound block-buster exerts practically all of its destructive effect in the same manner . . . and so does a stick of dynamite.

The heat released by explosion of any kind also is the same, so far as you are concerned. If you are close enough to the explosion, you will get burned. Again, of course, the atom bomb is many, many times hotter. At the billionth-of-second instant of explosion, the heat is about 1,000,000 degrees Centigrade. It will give you a nice sunburn at a distance of two miles. It will burn green gabardine cloth at about one and one-tenth miles.

"Invisible Shrapnel"

The third instant effect of any bomb is that it tosses fragments of its own structure all over the landscape. The fragments are the most important part of a hand grenade or an "anti-personnel" bomb, because they are intended to kill people. In demolition bombs, blast is most important—for they are designed to knock things apart.

Now, get this: if you consider this radiation you have heard so much about, merely as fragments of the bomb—call it invisible shrapnel, if you want to—you will have dispelled one of the most confusing facts about atomic explosion. It is perfectly accurate, all of the world's physicists to the contrary notwithstanding, to speak of these weird neutrons, gamma rays and alpha and beta particles simply as atomic shrapnel.

When you add up the three—blast, heat and atomic shrapnel—and then ask yourself how to protect yourself, you don't have to be a scientist to know the answer. Simply get behind the kind of cover that will protect you. If you will remember that, you can leave the gamma rays to the scientists. To you, they're shrapnel.

"Oh, but you can't see, smell, or taste this radiation stuff," you say.

So what? No soldier ever saw the bullet that hit him. You never saw the pneumococcus that gave you pneumonia, or the virus that gave you measles. The reason this talk about invisible radiation has assumed such terrifying proportions is that it has been made mysterious.

The atom bomb's blast, heat and shrapnel can make mincemeat out of the area of its maximum destruction. Nothing in this article should be interpreted as denying that for a second.

One more point before we return to the three "wheres" of atomic explosion: the so-called "secondary" effects. Secondary effects are what the instant effects—blast, heat and atomic fragments—cause to happen. Blast knocks down buildings, whirls deadly debris through the air. Heat sets fire to combustible materials. When buildings are knocked down, fires already existing in them—such as coal ranges, pilot lights, oil lamps and the sources of fire, such as electrical short circuits—start other fires.

With these preliminaries, let's have a look at:

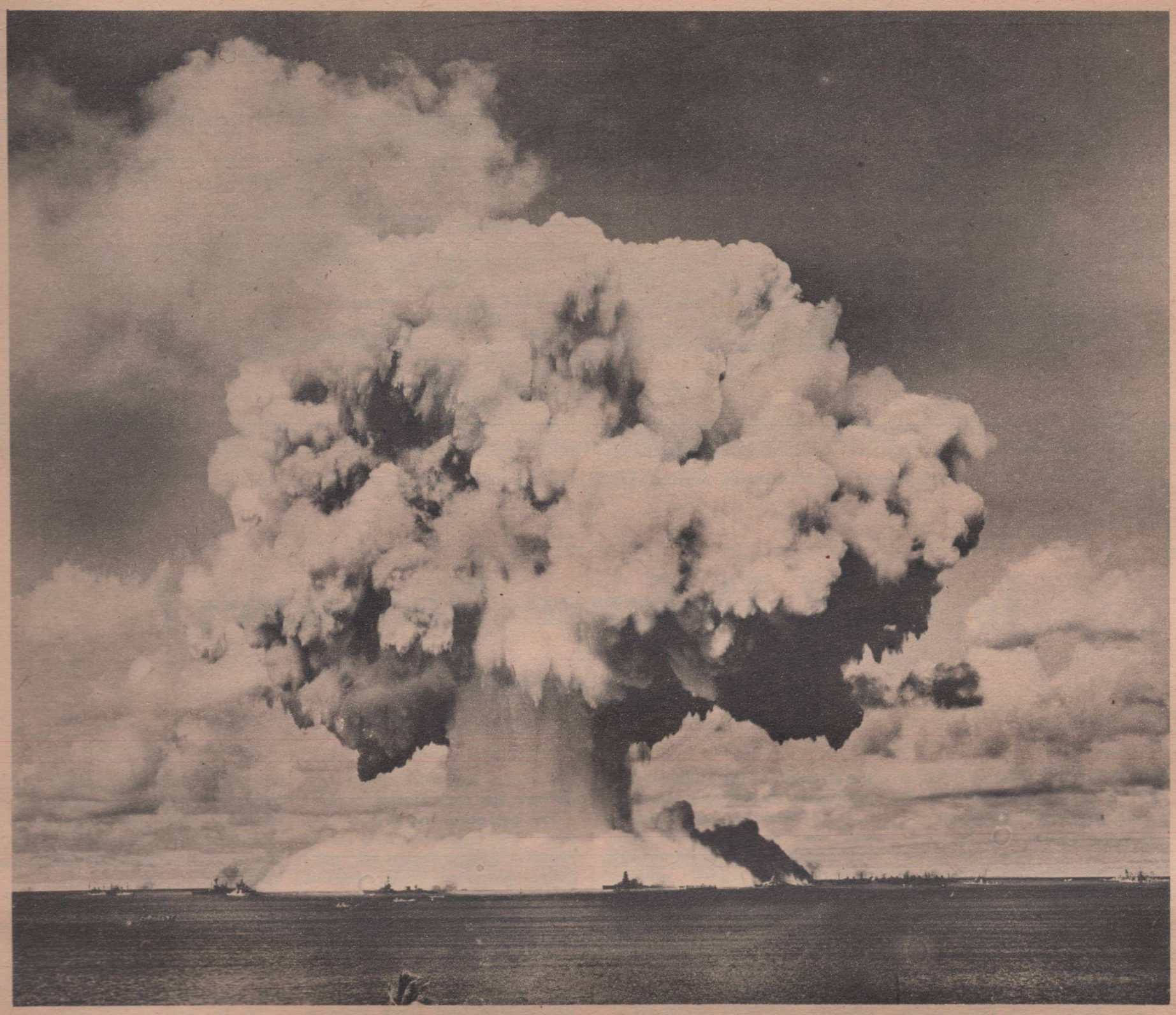
1. Atomic explosion in air:

Like any other weapon, the atom bomb has a height at which it causes the most of the kind of destruction most helpful to an enemy. In the case of the so-called "nominal" bomb—the kind exploded in Japan—that height is 2000 feet. At that height, the blast and the heat effects are most devastating.

Relative Devastations

There's nothing peculiar about that. A hand grenade has its maximum effective radius; so does a rifle bullet, or a trench mortar, or an Indian arrow or a Bushman's boomerang.

Within a radius of about half a mile, the blast damage is terrific. Only extremely sturdy buildings can stand up under it, yet it is a fact that persons closer than that to the bomb in Japan survived and are living as happily as circumstances will permit under the occupation. *They were under cover.* There is no point here in explaining in detail how much cover is required at various distances. The important fact is that how much cover is required is known—accurately, down to the fraction



"Base surge" of underwater explosion shows in foaming ruff at base of water column. Note size of ships.

of an inch—and if you are outside a half mile, and have your wits about you, and your civil defense organization is on its toes, you have a better than 50-50 chance of exasperating your grandchildren at a hale old age.

Don't misunderstand. You need cover, and plenty of it. And fast. But if your civil defense organization is on the job—and especially if you personally see to it that it is on the job by becoming a part of it—you can influence your own personal longevity table.

Now, radiation: Inside 2100 feet, only very thick cover—cover such as probably exists only here and there in any modern city—can save you from very serious injury and probable death. Outside 9000 feet, the instant radiation—(remember that phrase "atomic shrapnel") won't hurt you. Outside about 4200 feet, cover in a sturdy reinforced concrete building should do the trick.

Underwater Explosion

2. An explosion in the water: An atom bomb exploding under water acts much like any other bomb: it erupts a mighty column of water into the air. Unlike the ordinary waterspout which descends after a non-atomic burst, the water from an atomic burst carries its injurious fragments with it. These atomic fragments are so tiny that the water traps them. Therefore, when they fall on anything—ground, buildings, public streets, bridges—they infect that surface or structure with a continuing bombardment which can be very dangerous. If a strong wind is blowing, the mist carrying these tiny particles can invade open windows into homes, and cause injury. Close in, where the mist is heavy and laden with such particles, it can cause deadly injury.

That is why civil defense instructions urge you to stay under cover until someone tells you it is safe to come out. There may be an underwater explosion and it is smart to stay under cover until that mist has had a chance to settle. Then a team of civil defense people, known as "radiological monitors," measures the potency of the radiation deposited by the mist and gives you instructions accordingly. They may tell you to stay put, or to come out. Since they know, it's not a bad idea to do as they tell you. You'll live much longer.

Oh, yes. About that air-bursting bomb. If it explodes at 2000 feet, the injurious ash is carried upward, like smoke in a chimney—for the dreaded atomic "mushroom" is really a chimney—and it won't hurt you. In other words, all of the instant radiation that will hurt anybody if the bomb bursts high in air is over and done with in 10 seconds. Naturally, the lower the bomb is beneath 2000 feet, the more likelihood that the ash will be deposited on the surface beneath; and that brings up:

3. The underground or "contact" burst:

No one but a fool—or someone with enough atom bombs to throw around like confetti at a wedding, which is no nation on earth at the moment—is going to waste good atom bombs underground or on the ground. That would be like using a blockbuster to put out a street light. But a bombardier in a plane under attack can make mistakes; he can make mistakes even if he manages to sneak in undetected. Therefore, the low-bursting bomb has to be considered.

As in the water burst, an underground or on-the-ground atomic explosion would have a far lesser area of destruction than the mid-air explosion. It is common sense, however, to know that that much energy exploding, let's say, at 50 feet underground, is going to pulverize where the air-bursting bomb only smashes. A bomb of the Japanese caliber exploding at 50 feet underground—and depending upon soil conditions—could blow a hole 50 feet deep, the size of Logan Square. The radiation in the immediate vicinity of this crater would be deadly; you couldn't pass it in a speeding automobile. Furthermore, the dust and pulverized debris would be radioactive for a considerable period.

That's just about the story, with the physics and the mathematics left out, and it ought to explain why it is that civil defense leaders repeat and repeat and repeat a series of simple instructions:

"Take cover!"

Speed Is Vital

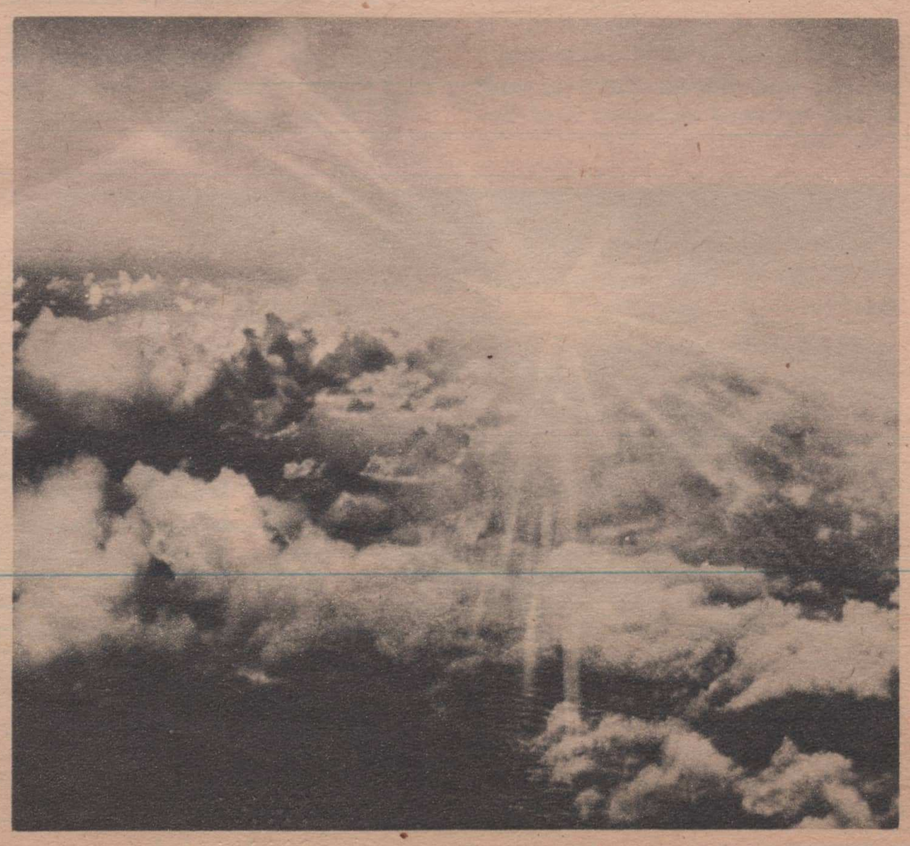
That's No. 1. If you are warned that an attack is just around the corner a few minutes away, get into or under the best shelter you can find. Stay away from open windows, if you are inside a building, and snuggle up against an inside partition.

"Stay put," if you are unhurt and there is no other immediate danger, until someone tells you it's safe to come out.

If you aren't warned, even the bomb flash is its own warning. A second or two—one step—can mean the difference between being someone who *needs* help and someone who *can* help.

All over the country, simple, easily understood instructions are being circulated on just what to do. Learn them and do it. Practice doing it. They are based upon a library full of the most precise and detailed measurements of what the atom bomb can and will do.

The bomb will do its job perfectly; it is up to you whether you do yours.

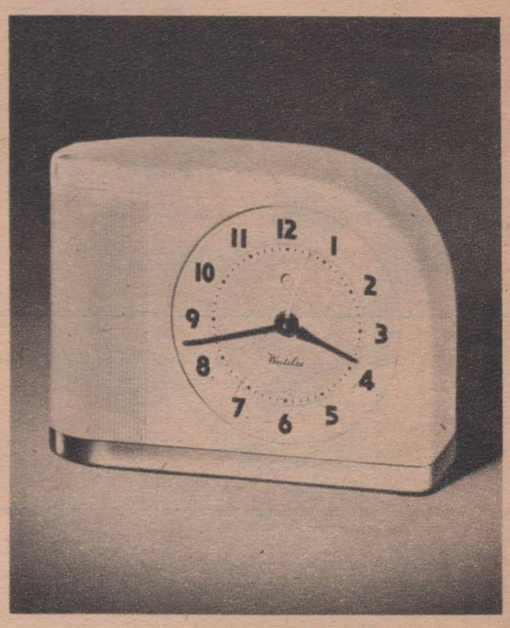


Blinding light is 100 times more brilliant than sun.

There's nothing like this

NEW... MODERN

way to wake up!



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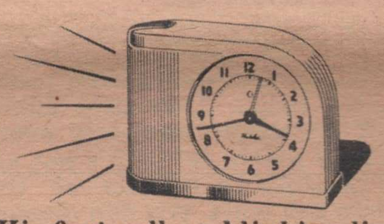
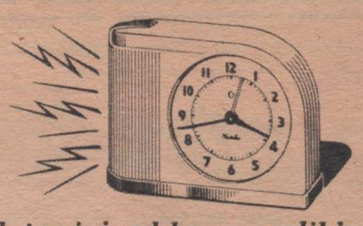


His first call—a blinking light...



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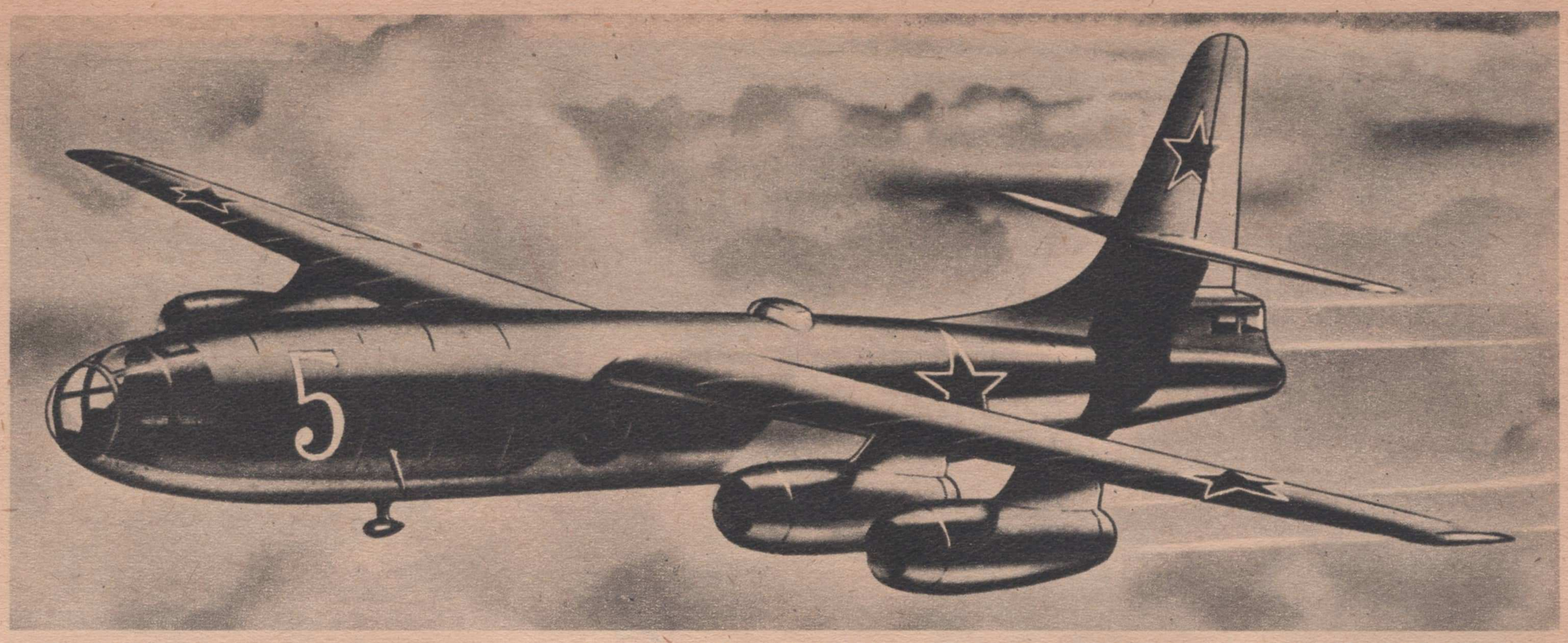


Russia has the means to carry out an attack. One of them is this four-jet bomber similar to our Boeing Stratojet B-47.

Is Civil Defense Necessary?

BY RAY MILLTON

WHY "civil defense"? It is a reasonable question. It demands a reasonable answer.

If civil defense is to be effective, it can come only from the individual American's conviction that it is vital, not only to his survival, but to the survival of a system of government and an organization of society which he wants for his children and his children's children.

Civil defense has been called "Operation Survival." Is it really that serious?

As a start, let's try to spell out the basic conditions under which it would become necessary for the home front to prepare for a violent disruption of its routine activities. Here goes:

1. An enemy with a definite potential reason for wishing to attempt such a violent act.

2. An enemy with the means to carry out the attack.

3. An enemy with the weapons to make the attack effective.

4. Targets in the home front which would justify expenditure of the means and the weapons.

World Outlook Today

Now, can those four points be related to any conditions which actually exist in the world today? Let's take the points in order:

1. Soviet Russia, in spite of a great deal of double-talk and blow-hot, blow-cold diplomatic poker playing, is still committed to a policy of world domination by a world Communist state, directed from Moscow through a system of satellite states. It is perfectly clear that this dream can be realized, at least so far as the Western Hemisphere is concerned, only over the dead body of the United States of America.

2. Soviet Russia has long-range heavy bombardment aircraft of the type of the American Boeing B-29 Superfortress, capable of very long range flights. She also has a substantial and probably growing fleet of the so-called "schnorkel" submarine, modeled upon the World War II German "Type XXI." This submarine is capable of high submerged speed. It could leave bases under Soviet control and command the shores of the United States without detection.

3. In September, 1949, President Truman announced that Soviet Russia had successfully carried out "a nuclear explosion." There is not one scintilla of evidence that Russia does not have "The Bomb." On the strength of the evidence, any argument that Russia does not have the bomb is just wishful—and very dangerous—thinking. Her developments in jet aircraft, rockets and guided missiles, aided by German scientists and technicians scooped up from Europe in the spring of 1945, are public knowledge. It would be stupid to suppose that Russian research in chemical and germ warfare has been neglected.

4. Two world wars have proven that the tremendous industrial strength of the United States is the backbone of her national security. That industrial strength happens to be concentrated in a series of "critical target areas"—that is, concentrations of plants and skilled manpower which are located either on or close to the seacoasts or borders of the United States. Such concentrations of industrial strength unfortunately are highly vulnerable to modern weapons—atomic, chemical and germ. They can be "hit," and the initiative—the "Command Decision"—lies with the potential enemy.

They also are vulnerable to what has been called "Weapon X"—sabotage; and Russia has developed both espionage and sabotage to a new high level of efficiency. The hapless fate of unwilling slave states, such as Czechoslovakia, proves that.

You have got to decide, as a responsible, thinking citizen, whether the argument up to this point makes sense. If you don't think that it does, forget it. If you do think that it does, maybe we had better have a look at the current national and international scene for useful tips on how the four factors apply.

The best summary of how they apply was contained in a status report—"Status Report III," officially—prepared under date of January 2 by the Military and Civil Defense Commission for Pennsylvania. If you happen to have a scrapbook or a clear mental picture of the headlines originating in Japan, Korea, Washington and Lake Success since June 25—the day the North Korean Communists threw their military Sunday punch at Korea's 38th Parallel—you have your own "Status Report III."

"Logic of Civil Defense"

The summary referred to contained seven major points which constituted, the Commission pointed out, "the logic of civil defense for Pennsylvania." They are:

"1. The security of the United States, as a member of the United Nations and as a leader in U.N. action, is imperiled by active war in Eastern Asia.

"2. Developments in the Eastern Asiatic War (Korea) within less than two months appear to have marked a willingness by Soviet Russia to defy the U.N. by actively supporting a satellite Communist state in a major act of aggression against U.N. forces in the field.

"3. These circumstances, upon their face, offer no hope whatever of an early re-establishment of international stability; on the contrary, the threat of a general war, global in extent, is real if not necessarily imminent.

"4. A general war would involve the United States in the most prodigious war effort in its history—a fact attested unequivocally by all responsible spokesmen of the Federal Government.

"5. In the event of a general war, the industrial potential of the United States would become a major target of enemy attack, by all available means, direct and indirect.

"6. The tremendous industrial and agricultural potential of Pennsylvania, lacking the geographical advantage of an inland position, would be vulnerable to such an attack.

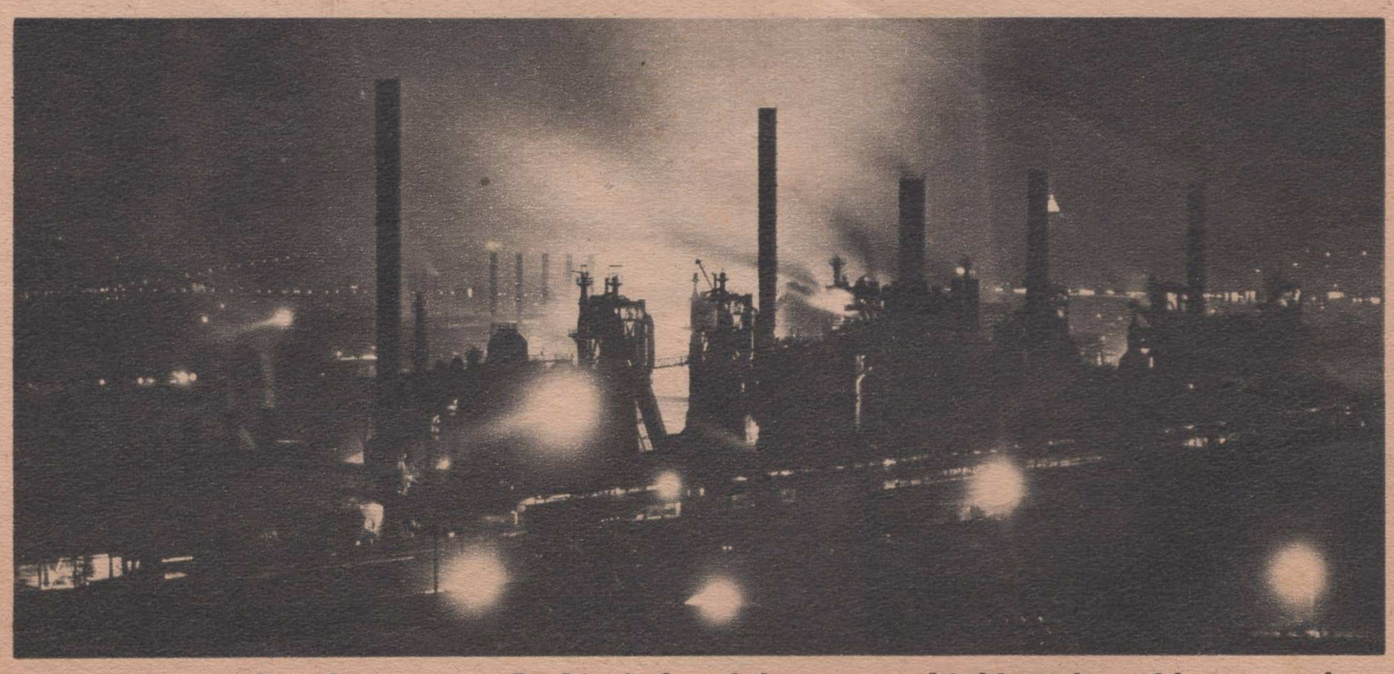
"7. The ability of Pennsylvania's industry to survive attack, whether from within or from without, and with it the production manpower essential to continued operation, could be the keystone of national survival."

In brief, put it this way: the tinder and steel to ignite a general war are present today, just as they were at Sarajevo in 1914, and on the Polish border in 1939.

The initiative lies with Russia. If Russia elects to touch off the explosion, it can only mean that the Kremlin believes that it has the power to wipe out the free world. That power must include the means and the weapons to level American industry to smoking ruins, unless you wish to believe Russia's leaders stupid beyond belief.

If your own status report adds up to about that of the State's civil defense planners, then the question no longer is: "Why civil defense?"

It becomes: "How soon civil defense?"



Pennsylvania has the targets. And its industrial areas are highly vulnerable to attack.

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Britons Have Experience

BY SIR JOHN HODSOLL

Director General of Training
Civil Defense Department, United Kingdom

THE main object of civil defense is to reduce to a minimum the casualties and damage which can be caused by air attack. This object is of vital importance because the home country is the base and mainspring of the fighting services.

Any heavy dislocation of production or loss of morale must, sooner or later, react on the ability of the country successfully to wage war.

I believe that fundamentally the principles on which any civil defense should be conducted are pretty much the same. The big problems, I think, can be grouped under fire-fighting, rescue, casualty service and social services.

There was probably more damage done by fire in the whole of the last war in all theaters than by any other air weapon, and there is no reason to suppose that history would not repeat itself if another war should come. The proper organization of the fire services is clearly of the utmost importance, and since no local fire service could hope by itself to compete with a heavy modern attack, plans for wartime expansion and training of the personnel in peacetime, and for mutual aid and reinforcement on a big scale, should have a high priority.

Problem of Rescue Work

The problem of rescuing persons, giving them first aid and getting them to a hospital, which can very well be grouped together, is another problem of the greatest magnitude.

Rescue work, like the work of the fire service, if it is to be carried out successfully, requires a high degree of skill and training, for which persons with building experience are the most suitable. We learned a great many lessons during the early raiding in Britain as to the need for this training and the many and difficult problems with which the rescue service may be faced.

It is for this reason that we have set up in Britain very elaborate rescue training grounds at our central schools, and propose to reproduce these grounds on a more modest scale at the level of our local authorities. It is only by intense practical training that the rescue service can hope to carry out its task. Here, again, the question of mutual aid and reinforcements is bound to arise under a heavy scale of attack.

Screening of Casualties

The organization of the casualty service, to handle what may be large numbers of casualties, needs no emphasis. The important point in all our experience is to screen the casualties and to make sure, as far as possible, that only those who require hospitalization reach the hospitals; and that the others are given first aid on the spot and then sent home or found shelter under other arrangements.

Unless this is done, the hospitals are likely to be completely flooded out. The other war lesson we learned was to give the minimum of first aid on the spot to any casualty who was due for

Who will take care of him?

hospitalization and get him to hospital as quickly as possible. We called this "blitz first aid" and its sole object was to take the minimum action necessary to save the patient's life and to make him as comfortable as possible, and get him into skilled hands with all speed.

The other major problem I have mentioned concerns the social upheaval caused by bombing. Large numbers of people may be rendered homeless, may lose their belongings and their money and get into all sorts of troubles due to the destruction or disruption of their homes. The prompt and sympathetic handling of all these worries and troubles is a most important factor in helping to keep up people's morale.

A Task for Women

This is a task for which women are particularly suitable, and was carried out in the main by the Women's Voluntary Services in Britain in the last war. We had not appreciated the magnitude or importance of this problem before the war, but as our experience increased, this service became one of the most important of the lot.

Experience in Britain was, of course, limited compared with that in Germany, where during the Battle of Hamburg, which went on for ten days, the Hamburg authorities were faced with 900,000 refugees to deal with in 48 hours. It is interesting to note that they did manage successfully to cope with this number, although it entailed, of course, tremendous improvisation.

I think this question of improvisation is worth mentioning, because, however well one's plans are laid, inevitably things happen which you have not provided for, and ability to improvise on the spot is one of the most important qualities required of anybody who has anything to do with civil defense.

The final point I would like to mention is that of information. If the civil defense forces are to be sent into action at the right place and in the right strength, those in charge must have information as to the situation. Under a heavy scale of attack the reports coming in from wardens and police, for example, will take time and will very naturally be concerned with the particular area in which they are operating.

Reconnaissance Needed

While these reports will be quite essential for the successful operation of the civil defense services when they get on to the ground, they will take some time to build up into a proper picture, and I believe that some form of aerial reconnaissance and some form of highly mobile ground reconnaissance teams will be of the utmost importance.

I have mentioned the question of reinforcements. We have always planned in Britain on the basis of trying to get each of our principal local authorities sufficiently strong to be able to absorb themselves a medium scale of attack. Anything greater would require reinforcements.

So far as I could judge the situation in the United States, I do not think mobile columns are suitable because of the enormouse distances which might have to be covered. In the majority of states, however, you have got large resources and I think that mutual aid, which might have to be on a big scale, would provide your reinforcement answer.

In planning, however, it is obviously of great importance that, having made the individual plans for the cities and states, there is some form of co-ordination and interchange of plans.

Finally, I should like to add that it is giving us all the greatest pleasure to be able to welcome now a steady stream of United States civil defense officials to the British Civil Defense Staff College and the British technical schools. We welcome this close liaison and are certain that the exchange of ideas which is possible under this arrangement will be of great mutual benefit to us both.

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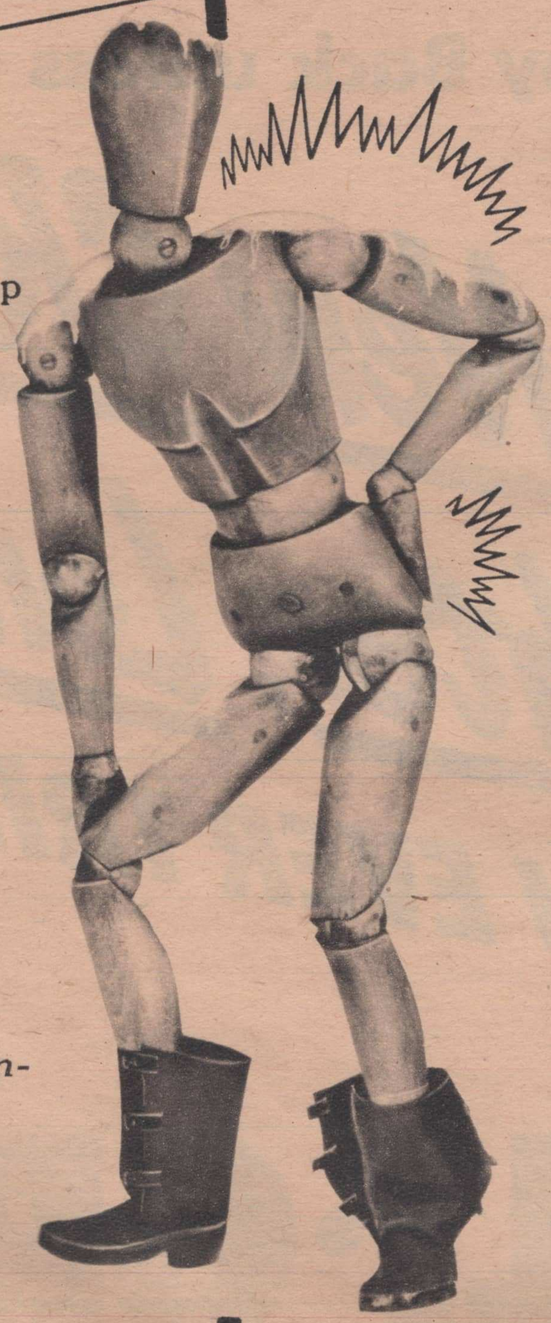

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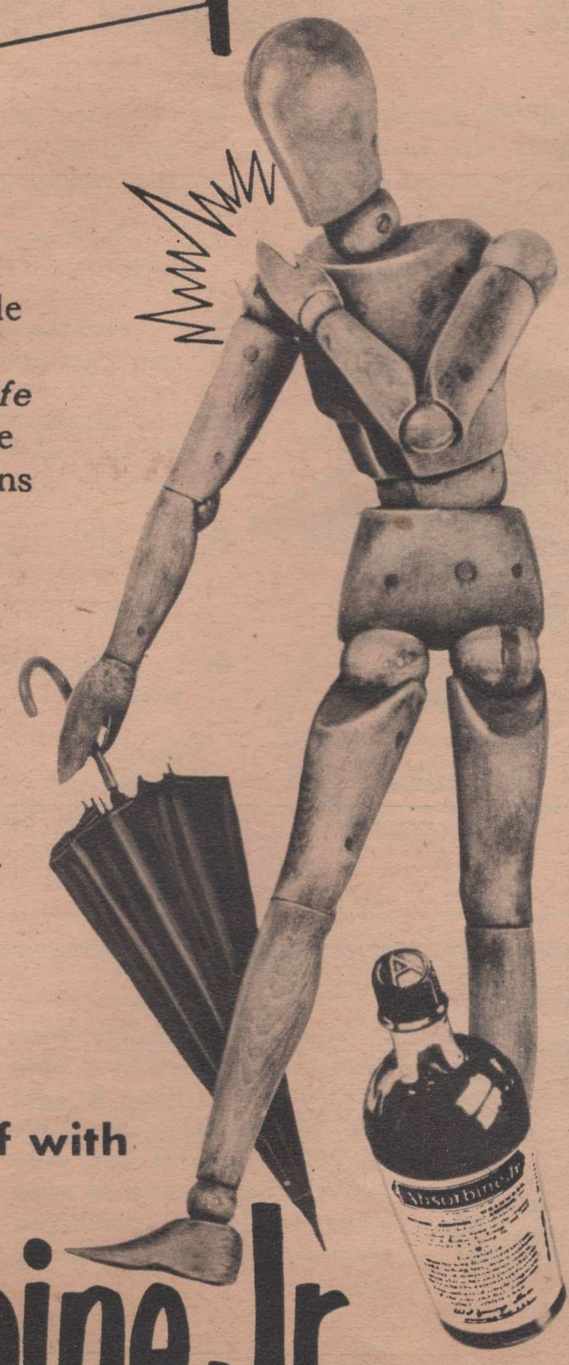
Damp weather NEURALGIC pain?



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In case the city is stricken, wave after wave of reserve forces will be on call.

Our Neighbors Will Help

BY BALDWIN B. SMITH

Eastern Area Director of Defense

IF AN enemy attack in force is delivered against Philadelphia, the population of the Philadelphia area will be split into two classes by the holocaust:

Those who *need* help—and those who *can* help.

The kind of assistance will be the same, no matter where it comes from or who gives it. It may be a fire company from a neighboring community, which responds instantly to the cry for aid; or it may be a mobile surgical team from Butler or Erie working in a hospital improvised in one of our intact school buildings. The difference in assistance is in who gives the assistance and who orders it given.

Anyone who studies the problem of the relief of a city stricken by a major attack with modern weapons must arrive at certain conclusions. Among them are these:

1. No city, however large or wealthy, can hope to be self-sufficient. Mayor Samuel and Major General Cota, Philadelphia's Civil Defense Director, early recognized that fact.

2. Civil defense planning is area planning, and the area must be large enough to offer at least a reasonable hope of self-sufficiency.

3. The area must be large enough to provide readily available temporary shelter for those made homeless by the attack, and instant first aid and temporary hospitalization for those injured in the attack.

Warning Against Chaos

The normal human instinct is to rush instantly to the aid of one in distress. It is a fine instinct. But in a disaster of the proportions which modern weapons are capable of inflicting, it would result in chaos.

To meet this problem of organization and control, civil defense planners several years ago conceived two definitions or labels for the kind of support to be rendered.

The first is "mutual aid." The second is "mobile support."

One of the basic differences between the two is the speed with which they can be alerted, mobilized, assembled, transported and committed under single command.

For the purposes of the Philadelphia test exercise, those counties immediately touching upon Philadelphia — Delaware, Chester, Montgomery and Bucks counties in Pennsylvania—have been designated the "mutual aid area." That means that this city's civil defense authorities may proceed to discuss and arrive at firm, detailed and reciprocal mutual aid pacts with these counties. As the result of such mutually accepted agreements, the organized assistance which those counties are prepared to give will move instantly upon Philadelphia's appeal, without direction from the Eastern Pennsylvania Area or from state headquarters.

The word "move" does not necessarily mean that all of the civil defense services which the four mutual aid counties have available will instantly mobilize for transportation to the city. Certain of the services will not move at all, because they can render greater service in the solution of Philadelphia's problems by staying where they are.

Firemen to Act Quickly

It is reasonable to suppose that most of the available fire forces in the mutual aid area will respond instantly and take predesignated stations, leaving only enough in their home communities to provide adequate protection against normal fire hazards.

The services which will not move—the emergency welfare services might be one; a considerable portion of the emergency medical services another—will stay in place because they must receive the overflow of Philadelphia's injured and homeless.

Mobile support, by contrast, moves only by direction. Anyone familiar with a municipal fire department knows that a certain number of pieces of apparatus respond to the first alarm. Additional equipment does not respond, under any circumstances, until it is called by a fire officer who has had a chance to estimate the need. He may strike a second, or third, or fourth alarm. The important point is that a trained commander, studying the situation on the ground, commands additional assistance, which is organized, trained, equipped and ready to respond when called.

In a rough sense, that is how mobile support operates. The term is self-explanatory. It is "mobile"—it can move with its own transportation over predesignated routes on call; and it is "support"—it can reinforce the various specialized civil defense forces already on the scene.

In the first few hours following an attack, the local civil defense commander will be busy receiving information on the extent of the crisis.

Can Estimate Needs

His first reserves—those from the mutual aid area—either are in action or ready to enter action. Through certain predesignated studies, he can estimate rather accurately what his casualties are, the number of his homeless, the threat of fire, the need for rescue teams. He can estimate how badly crippled his own civil defense forces are as a result of the attack; he knows quite accurately what aid is being rendered by adjoining counties. Therefore, he can make some shrewd estimates as to what additional assistance he requires.

Through his control center, he states the situation to the Area Director. The Area Director, likewise knowing what forces are at his command in the eastern counties, decides that he must order them in, but that in addition, resources of other areas of the state—and possibly of adjoining states—are critically needed. Thus, in wave after wave, the reserve forces begin surging toward Philadelphia. Some may drop off to reinforce hospitals, emergency shelters and police in the counties outside of Philadelphia. The flexibility of mutual aid and mobile support permit the reserves to be distributed where they will be most helpful.

I hope that this explanation does not make the organization of the aid and support forces sound simple. The recruitment, training, organization and command of the thousands of specialists to whom these paragraphs have referred will require the most heroic effort of which our home front is capable.

Battles are not won by retreating or running away. Defensive battles are won by holding fast, with grim determination, to the ground which we occupy.

Be Happy— Go Lucky!

Come join me at the Mardi Gras
In dear old New Orleans,
Where Kings who know tobacco best
Give Luckies to their Queens!

ENJOY YOUR CIGARETTE!...

If you're not happy with your present brand *(and a 38-city survey shows that millions are not)*, smoke Luckies! You'll get the happy blending of perfect mildness and rich taste that fine tobacco—and only fine tobacco—can give you. Remember, Lucky Strike means fine tobacco. So get complete smoking enjoyment. Be Happy—Go Lucky today!

L.S./M.F.T.—Lucky Strike Means Fine Tobacco

I ski right off the highest jumps
And never take a spill,
But I prefer a Lucky Strike
To really get a thrill!

I strut my stuff upon a stage
And thousands praise my name.
But praise for Lucky Strike, I fear,
Puts all my praise to shame!

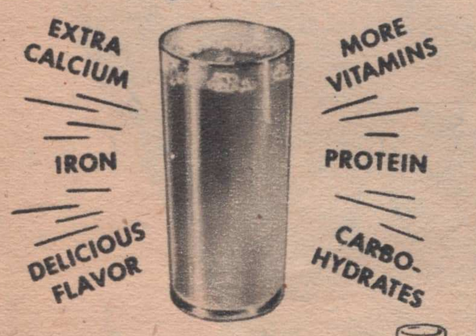
COPR., THE AMERICAN TOBACCO COMPANY

GIVES A lift TO YOUR BAKING

Davis
DOUBLE ACTING
BAKING
POWDER

"Double action" works with you for success... batter rises twice: first in mixing; again in oven. You get super-lightness, super-texture to make you prouder than ever. Send for easy baking, Quick-Mix Charts. R. B. Davis Company, Dept. PI-8 Hoboken, N. J.

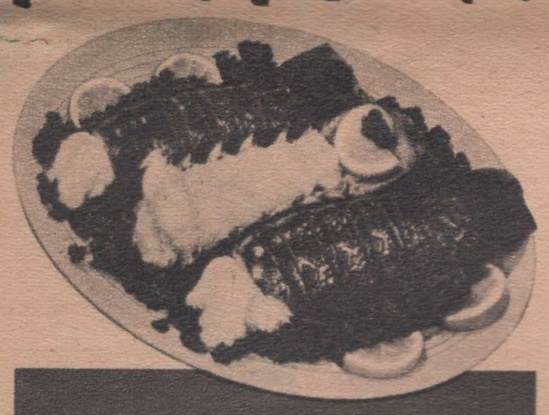
You wouldn't believe what 2 Teaspoons can do to a glass of milk!



Cocomalt steps up food and flavor values—adds important vitamins and minerals, and a chocolaty deliciousness that makes each taste a treat!

They Belong Together!
Cocomalt
... and milk

Real Food Economy!



SUPREME FLAVOR!
Just boil 'em or broil 'em, serve 'em in many ways—but always a flavorsome, tender delight!

A great big whole piece of delicious meat, no work or fuss when you enjoy GENUINE

SOUTH AFRICAN
Rock Lobster Tails
BEST IN TASTE . . . LEAST IN WASTE

Fresh frozen from the cold, clear, salty South Atlantic. Treat your family today. Sold individually and 2 in a carton. The Genuine is marked "SOUTH AFRICAN."

FREE RECIPES

SOUTH AFRICAN ROCK LOBSTERS
8 West 40 St., N. Y. 18
Please send Booklet A-4

SMOKER'S COUGH?

FAST 3-WAY RELIEF!

If you've a "raspy cough" from too much smoking, get *real* help with Smith Brothers Black Cough Drops!
1. Ease parched throat due to smoking
2. Soothe irritated throat membranes
3. Help loosen phlegm
P.S. And remember, Smith Brothers Black Cough Drops sweeten smoker's breath.

SMITH BROTHERS BLACK COUGH DROPS

DON'T Shut off the main water and gas pipes leading into your cellar.

DON'T Tamper with master switch or wires.

DON'T Jam wires with unnecessary calls.

Gas, Electricity and Water

BY BARBARA L. WILSON

IN THE event of an atomic bombing the public utilities in this area have definite jobs to do. To make these plans effective your cooperation is necessary.

In case of a real or threatened emergency the Philadelphia Electric Company urges that you *do not pull the master electric switch near the fuse box.*

In case of a real or threatened emergency the United Gas Improvement Company urges that you *do not turn off the main gas valve near the meter. Only* if your premises are badly damaged should you attempt to turn off the main gas valve yourself before a representative of the gas company can reach your property.

If you have time, turn off all cooking appliances, heaters, irons, oil burners, etc. Close all fuel and draft doors on coal burning or wood stoves. Extinguish all kerosene burning lamps and candles.

Do not try to shut off any pilot lights or automatic gas or electric appliances, such as furnaces, water heaters or refrigerators.

Perhaps you are asking yourself, "Is this sound advice? If I don't turn the gas off and a pipe is damaged won't the gas escape through my house? If I don't pull the electric switch and wires are damaged, won't fire break out in my house?"

Chances Weighed

Yes, both these things could happen, but—the chances are you would do less harm if you followed instructions.

If your home is in an area that is not affected by a bombing and you have turned off the main gas valve, it might be months before the gas company could send a man to your house to turn the gas on again. That would mean months before you and your family have cooking and heating facilities.

Furthermore there are few of you who know how to turn off your gas properly. If you shut off the main gas valve, air comes into the pipes. If you turn the gas on again without the aid of a qualified worker from UGI, the gas, meeting the air in the pipes, could cause a dangerous explosion.

Keep Flashlight Handy

Always have a flashlight in the house. If you have to go into a darkened basement carry the flashlight with you. *Do not* strike a match. Gas or oil fumes may be present and an explosion could result.

If you pull the master electric switch you could be depriving yourself of your only form of contact with the outside world, your radio. Through your radio you will get the latest news and instructions from local defense authorities in the event of an attack.

If a bombing occurs, crews of workers from the Philadelphia Electric Company and the United Gas Improvement Company will be dispatched to affected areas under direction of Civil Defense authorities. There the shutting off of gas and electricity through the main valves and switches in the specific districts will be handled by the workers and these will not be turned on again until the damage is repaired and the emergency period is over.

In the event of a bombing, the Bureau of Water urges that you comply with the following suggestions:

Do not shut off the water supply in your home unless a leak or broken pipe occurs. Familiarize yourself with the location of the main shut-off valve, so that you can operate it quickly if necessary.

Store Drinking Water

Fill suitable sterilized closed containers with water and place in cellar for emergency drinking use only. There should be at least a gallon of water for each person, carefully stored from physical harm. Large containers should also be filled and set aside for miscellaneous purposes. Do it now! Tomorrow may be too late.

Conserve water at all times, especially during the alert and emergency periods.

Have a garden hose connected at home. After the attack is over you may have to combat fire or wash down for decontamination.

Be careful of drinking water after an atomic explosion. There is little chance that the water inside household piping at the time of attack will be radioactive. Nevertheless, even if the water is available, *don't continue using tap water for drinking purposes unless you have received official information that the city system is safe to use.* This precaution is necessary not only because of radioactivity but because of other dangers like typhoid and dysentery that can pollute damaged water systems.

Boiling Won't Kill Rays

Remember, boiling *does not* remove radioactivity.

If you are deprived of water from the city's public water supply system, you will be notified by the Civil Defense authorities where auxiliary and safe water supplies are available.

For miscellaneous purposes, water can be drawn from the household hot water tank. These tanks should be maintained periodically by flushing and cleansing so the water will be at its best if needed.

Keep some muslin or cotton on hand for screening any water which may become dirty.

Chlorine Sterilizes Water

Set aside a supply of chlorine tablets or a bottle of chlorine water products to be used for water sterilization upon instructions from Civil Defense authorities.

Consideration should be given to providing for disposal of human waste, such as a commercial or improvised chemical commode.

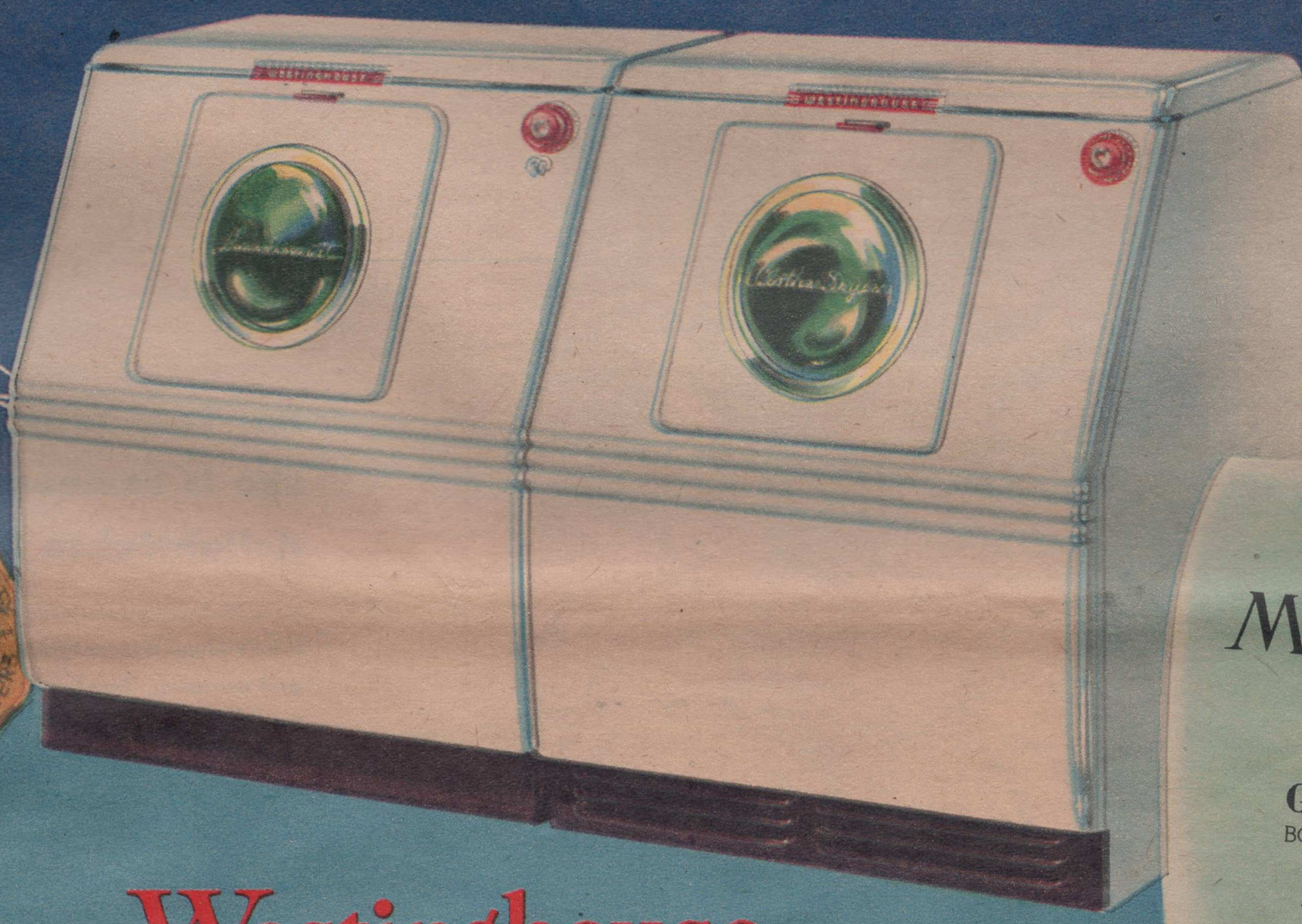
The Bell Telephone Company urges that you *do not* use your telephone to make unnecessary calls during or after an air raid. Your impulse will be to call relatives and friends to learn if they are safe. But such calls tie up lines needed for emergency calls.

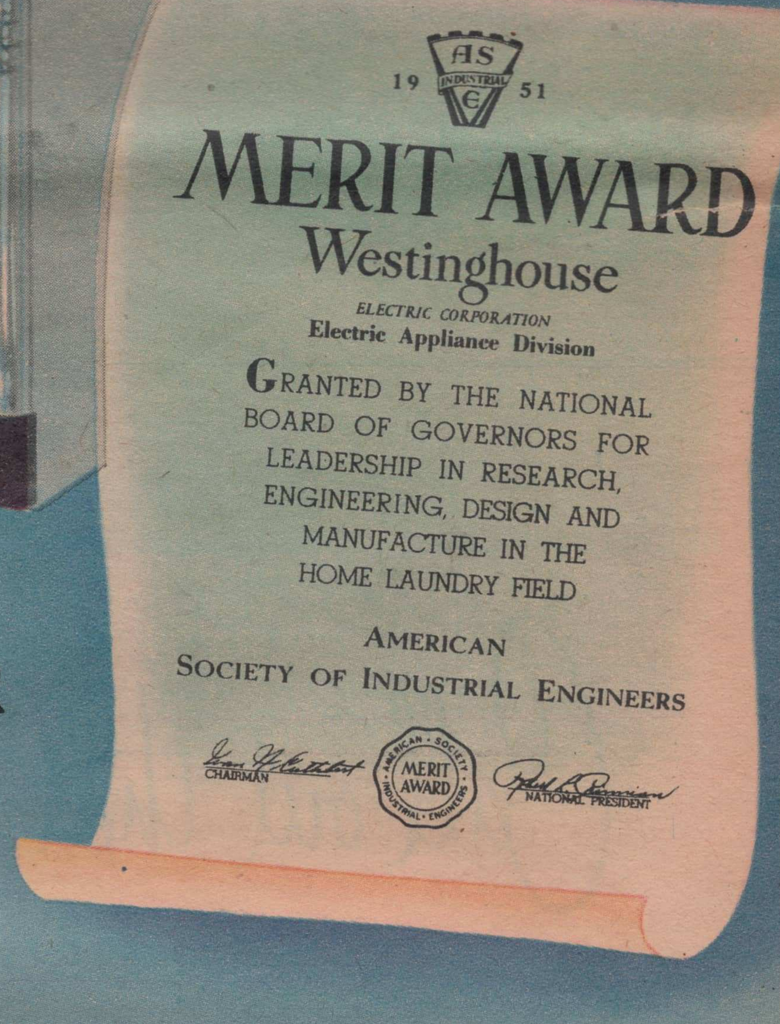
The mission of the Philadelphia Transportation Company will be to call into service its buses, trackless trolleys, street cars and subway-elevated trains and, wherever possible, taxicabs, trucks, railroad equipment, aircraft and watercraft for the evacuation of the homeless and injured. It will also be PTC's job to get defense workers to their important jobs as soon as possible.

DO Shut off open flame burners, irons, heaters and oil burners.

AMERICA'S FAVORITE TWINS

win famous Merit Award





Westinghouse

LAUNDROMAT® AND CLOTHES DRYER

AUTOMATIC WASHER

honored by American Society of Industrial Engineers for highest

QUALITY

Westinghouse is proud that its famous laundry "TWINS" have received this citation, which reads in part:

> *"because they are sound in engineering principle and design, produced from correct materials and manufactured in strict conformance to the accepted standards of quality controlled production processes"*

But Westinghouse is even prouder of the warm enthusiasm with which women all over America praise the Westinghouse Laundromat and its twin, the Westinghouse Clothes Dryer, for outstanding performance in their homes . . . in saving work, clothes, time and money.

Proved in the homes of America. Proved by America's industrial engineers. Now *you* can be *doubly sure* that you are buying the best when you choose the famous Westinghouse "TWINS" . . . for work-free, care-free automatic Clothes Washing . . . and automatic Clothes Drying.

YOU CAN BE SURE . . . IF IT'S Westinghouse

Mrs. Robert Bacon Whitney

—her face tells you she is someone delightful to know

Mrs. Whitney's face speaks for her with a soft-toned charm that is enchanting—and arresting. You love to watch her—because her face is so truly beautiful, and because it has such a warm way of revealing her delightful Inner Self—her lovely serenity, her natural friendliness.

Especially you notice the fresh, pearl-glow of Mrs. Whitney's complexion. "I use Pond's Cold Cream," she says. "I find it my most necessary beauty help."

Call out that magic unseen woman within you—

TO HELP YOU EXPRESS YOUR LOVELIEST SELF

The inhibitions of self-doubt, the sense of *missed* opportunities—cast a tragic shadow over far too many women's lives.

Yet—no woman needs to stay in this shadow. *You can come out. You can change.* A power within yourself can help you—a power that works through the interaction of your Inner Self and your Outer Self—the way you *feel*, the way you *look*.

Haven't you felt this power give you a happy confidence when you *looked* your very nicest? But—how it can dim you when you *don't show* your best self! That's why you need to turn perfectionist about those details that add so much to *outer* charm and *inner* poise.

"Outside-Inside" Face Treatment

Just give more thought to the way you care for your face—*and see the rewards you'll get!* This "Outside-Inside" Face Treatment with Pond's Cold Cream has a way of waking your face up to a lovely, clear, soft look. And, because it is *cream* cleansing, it *can't dry* your skin. Do it always at bedtime (for day cleansings, too). *This is the way:*

Hot Stimulation—a quick splash of hot water.

Cream Cleanse—swirl light, fluffy Pond's Cold Cream all over your face and throat to soften dirt and make-up, sweep them from pore openings. Tissue off.

Cream Rinse—do another Pond's creaming to rinse off last traces of dirt, leave skin immaculate. Tissue off.

Cold Stimulation—a tonic cold water splash.

Pond's "Outside-Inside" Face Treatment actually works on both sides of your skin. *From the Outside*—light, fluffy Pond's Cold Cream cleanses and softens as you massage. *From the Inside*—every step of this treatment stimulates circulation.

Mrs. Whitney says: "My face has such a *glowing*, clean feeling after this Pond's treatment."

REMEMBER—It is not vanity to develop the beauty of your face. When you *look* lovely, something happy takes place in you—sending a bright, new confidence out from *you* to all who see you—bringing others closer to the *real* Inner You.

You hear it everywhere—
"She's engaged! She's lovely! She uses Pond's!"

If this were your home, would you be prepared to give first aid treatment?

First Aid Will Save Lives

BY LIBERA ROSS

IN PREPARING for a possible atomic attack, proceed on the theory that, if it occurs, you will have to be your own first aid station—for some hours.

Physicians, nurses and volunteer medical squads will be overworked. Hospitals will be too busy to care for any but the most critically injured. Under such conditions the knowledge and application of first aid principles may enable you to save many lives—and among them may be your own.

On the next two pages, Today presents a convenient first aid chart that may be saved for ready reference. It includes most of the injuries that may be incurred, how to recognize them, and first aid treatment.

The Southeastern Pennsylvania Chapter, American Red Cross, which includes Philadelphia, Montgomery, Delaware, Bucks and Chester counties, currently is conducting more than 300 classes in first aid throughout the area, training nearly 10,000 persons to care for themselves and others.

Free Training Offered

This self-help training offered by the Red Cross is free, and both day and night classes are held. You can enroll for training at Red Cross headquarters, 253 N. Broad st.—or telephone LOcust 4-2530, and ask for the First Aid Service.

Know-how is vital. So is equipment. If your home contains a well-stocked first aid kit, you have a decided advantage.

The materials in a kit intended for use after atomic attack should be the same as those required for any other disaster. In atomic raids, most of the injuries are similar to those incurred in workaday living. More than 50 percent of them are the ordinary cuts, bruises and broken bones the average boy endures during the growing-up process. Burns caused by the heat flash and those from ordinary fires account for about 30 percent of the injuries. Radiation injuries are relatively few.

Many persons may be injured when knocked down by the "shock wave" that comes one to three seconds after the flash of the bomb. If you are caught standing upright, you may be knocked over like a bowling pin, may suffer a concussion and/or broken bones.

There are two other potential dangers: flash burns and radiation sickness.

A flash burn is exactly what the name implies—a burn from the heat flash of the bomb. This danger lasts only about three seconds, during which you either will be burned or not, depending on whether the light has a direct path from the exploding bomb to you. If you are in the shadow of a building or indoors away from windows or are wearing loose, light-colored clothing chances are you won't suffer a flash burn.

But if you should, remember that a flash burn is the same as ordinary burn, both in effect and in degrees of intensity, and should be treated as such.

Radiation sickness, caused by the gamma rays given off by the bomb, isn't so simple. You can't feel the rays. First symptoms of the sickness, even in the most severe cases, don't appear for an hour or so after the blast.

Danger from the rays lasts for about 90 seconds after the blast. If you are 1½ miles or more from the explosion, the rays usually have no effect. If you are within a mile of the burst and aren't protected by a building or a natural barrier, you may suffer serious effects.

But rays will not kill as many people as will the blast and heat. Even a dose of 300 r's (an "r" is a measure of radiation, as a kilowatt is a measure of electrical energy) would not leave you unable to have children. It would not make you permanently bald, although you might lose your hair temporarily.

Symptoms of Radiation

How could you tell whether you had radiation sickness? With a severe (400 r's or more) or a moderate (100 to 300 r's) dose, you would begin to vomit within one to two hours after the blast. A mild case might not manifest itself for a few days—sometimes even weeks.

However, after a bombing, many things could cause you to vomit. The fact that you did so would be no certain indication that you had radiation sickness. You should go to a doctor for a check-up.

Richard Gerstell, an authority, points out: "Because they have worked and experimented with radioactivity for over 50 years, doctors know more about sickness from atomic radiation than they know about polio, colds and some other common diseases. Unless you get a hopelessly large dose—up toward 600 r's—you can get completely well again."

First Aid Kit

The following items are recommended for inclusion in an emergency first aid kit:

1-inch compresses (Band-aids).

3 x 3-inch gauze squares in individual packages.

Triangular bandages.

Sterile gauze square, about 1 square yard.

Roll of half-inch adhesive tape.

Burn or petrolatum ointment.

Scissors.

Baking soda (sodium bicarbonate).

Alcohol.

Tincture of iodine.

Aromatic spirits of ammonia.

Here's Why You Need Bayer Aspirin When You Have A Cold

—*to Feel Better Fast!*

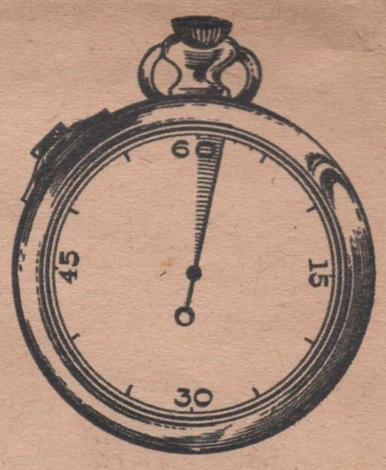
AT THE first sign of a cold—*before you do anything else*—take two BAYER ASPIRIN tablets with a full glass of water. Here's why:

When you have a cold, it's almost invariably accompanied by a headachy, feverish feeling and muscular aches and pains. And it's very important to your well being that you treat these distressing symptoms with a medication that will *relieve* them ...*relieve* them quickly. By taking BAYER ASPIRIN at the first sign of a cold, you'll get this important relief.

No matter how you try to stop or shorten a cold, we believe that your own doctor will tell you that this is sound advice.

FEEL BETTER FAST

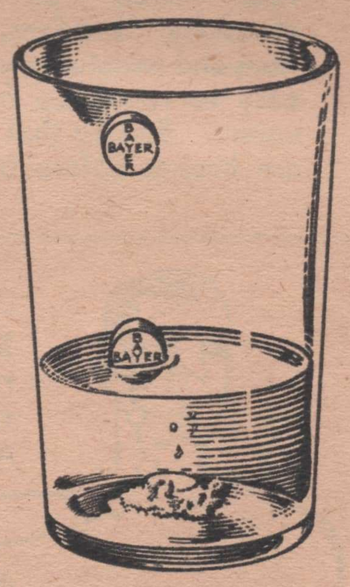
And when you use BAYER ASPIRIN, you'll discover why millions have followed this advice with remarkable results. For BAYER ASPIRIN works fast. It's actually ready to go to work in two seconds. And this is one reason why it brings you amazingly quick relief from these painful cold symptoms.



This two second speed is something you can see with your own eyes by dropping a BAYER ASPIRIN tablet in a glass of water and "clocking" its disintegration.

WHAT TO DO FOR SORE THROAT

When your cold causes a sore throat, gargle with three BAYER ASPIRIN tablets dissolved in one-third of a glass of water. This makes a highly potent medicinal gargle that almost instantly soothes tender throat membranes, relieves pain and irritation.



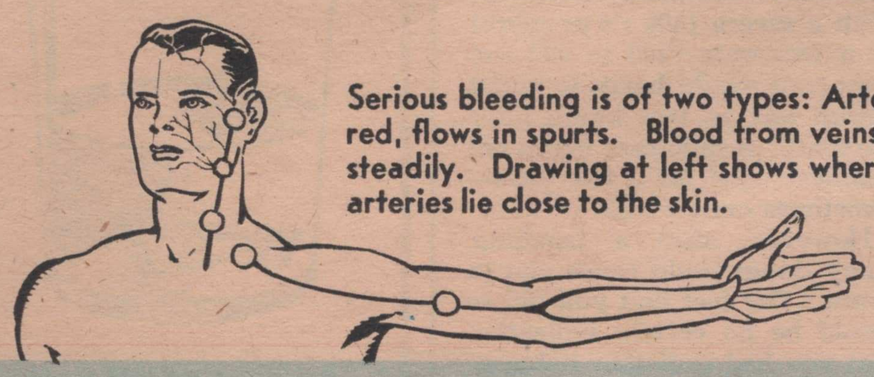
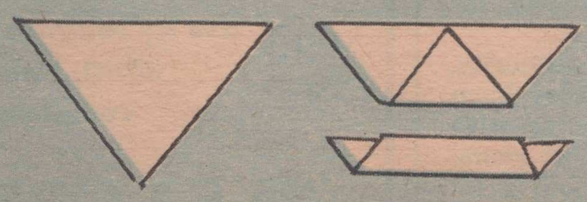
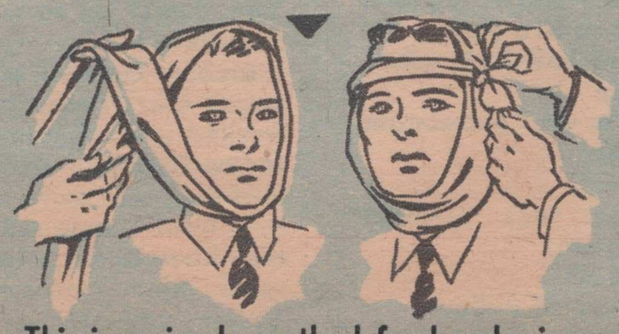
Besides being effective, BAYER ASPIRIN is also gentle. Its single active ingredient is so gentle to the system that doctors regularly prescribe it even for small children.

Keep BAYER ASPIRIN handy. When you buy, be sure to ask for it by its full name—*Bayer* Aspirin—not just for "Aspirin" alone.

Because no other pain reliever can match its record of use by millions of normal people, without ill effect, one thing you can take with complete confidence is genuine

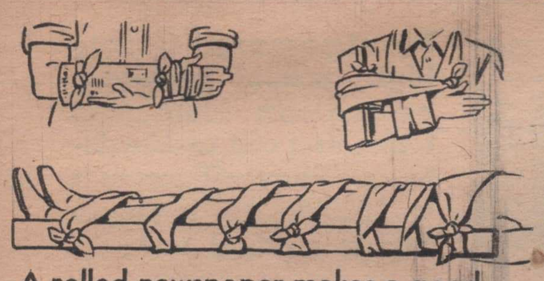
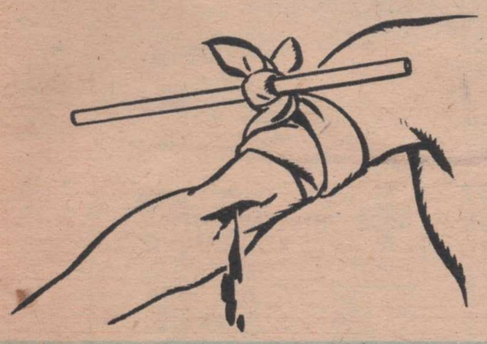
BAYER ASPIRIN

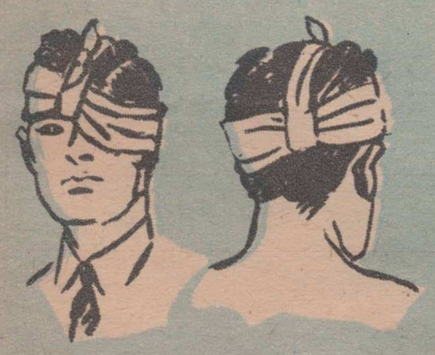
FIRST AID: *In an Atomic Emergency*

TYPE OF INJURY	SYMPTOMS AND CAUSES	IMMEDIATE TREATMENT
BURNS—RADIATION	Flash burns from an atomic bomb are no different from any other burns and are treated according to their severity. There is reddening of the skin, pain, blistering or cooking and charring of the tissues. FIRST DEGREE—Skin reddened and painful but not broken. SECOND DEGREE—Skin reddened and blistered. THIRD DEGREE—Deeper destruction of tissue, charring, cooking.	Remove or cut away clothing from burned area, except where stuck to skin. For first degree and small burns, apply petrolatum or burn ointment and cover with clean cloth or sterile bandage.
SHOCK	Shock is the chief cause of death in air raids when victims are not killed outright. Most injuries, especially crushing injuries, cause shock, so treatment should be started immediately without waiting for symptoms to develop. The patient may feel giddy, cold and sick or nauseated. His skin will be pale, his expression vacant, his eyelids drooping. His pulse is weak and faster than a normal 72, and breathing is quiet and shallow.	Keep patient warm, but not to the extent of sweating, since this increases shock. Keep him lying down with head low and feet elevated. Give aromatic spirits of ammonia in water if conscious.
CRUSHING INJURY	In the event of a large scale air raid, many persons will be trapped in partially demolished houses or pinned down beneath falling beams or other wreckage.	If the victim has been thrown clear of the wreckage or is only lightly pinned down, you may be able to extricate him yourself. *Approach partially demolished buildings with caution.*
SIMPLE FRACTURES	Simple fractures are caused by an injury which breaks a bone without causing an external wound at the site of the break. Victim may have heard or felt bone break and area of break will be very sore. Look for swelling, discoloration, inability to move affected part or loss of motion in nearby areas. Compare suspected break with corresponding part on other side of body.	Keep patient lying down and motionless; try to make him as comfortable as possible without moving him. Suspected break may be supported by padded coats or newspapers.
COMPOUND FRACTURES	Compound fractures are accompanied by a wound at the site of the broken bones. They include all the symptoms of a simple fracture with the addition of bleeding —often severe. In many cases the ends of broken bones can be seen protruding through the skin. Remember, however, that even if they cannot be seen, splintered ends of broken bones still may be present.	If a compound fracture is accompanied by profuse bleeding, place dressing over the wound and bandage lightly. If bleeding persists it may be necessary to apply a tourniquet.
WOUNDS	Four kinds of wounds, abrasions, incisions, lacerations and punctures, usually are easy to recognize from their nature. Be sure that no bones are broken before treatment!	One of the most common wounds in air raids is a penetrating wound of the abdomen or stomach (left). Victim should be propped up with knees raised and a loose dressing applied.
BLEEDING	 Serious bleeding is of two types: Arterial blood is bright red, flows in spurts. Blood from veins is darker and flows steadily. Drawing at left shows where some of the main arteries lie close to the skin.	Try to check blood flow with a thick compress. For arterial bleeding apply pressure between heart and wound. Bleeding from veins may require pressure on side of wound away from the heart.
BANDAGES	 The triangle bandage is the most useful in first aid because it stays on well and is easy to improvise from most any kind of cloth. A 40-inch square of cloth will yield two such bandages.  This is a simple method for bandaging wounds of the chin and side of face. Bandage for serious wounds of scalp.	

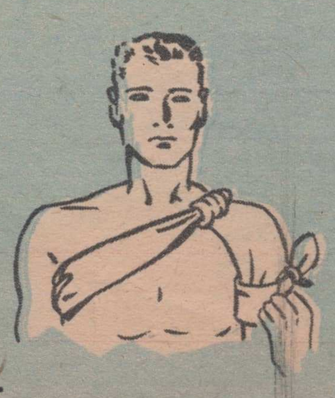
Remember These Fundamental Rules

1. Keep injured lying down; look for obvious injuries
2. Keep patient warm; attend serious bleeding at once
3. Call for physician or ambulance only in worst cases

FURTHER TREATMENT	DON'T DO THIS	RECOMMENDED FIRST AID TREATMENT
On large, deeply burned areas cover with dry bandage. Keep patient lying down and warm.	Don't use cotton directly on a burn. Don't use iodine or boric acid. Don't attempt to cleanse large burns. Never attempt to open large burn blisters yourself.	Shock is always present in extensive burns; treat accordingly. Avoid use of greasy ointments on second and third degree burns. Instead, apply sterile gauze pads soaked in weak solution of baking soda or Epsom salts. Danger from a small, deep burn is much less than from a broader burn of less degree. RADIATION SICKNESS—Victim should be hospitalized as soon as possible. Rest, whole blood transfusions, penicillin injections help.
Profuse bleeding and exposure add to the seriousness of shock. Try to keep patient from seeing his own wounds. Further stimulants may include black coffee or strong tea.	Don't prop up patient except in chest injuries or nose bleed. Don't give alcoholic stimulants.	Any person who has experienced a bombing probably is suffering from shock to a greater or less degree. Immediate attention and the restoration of confidence are important. Since shock is largely a circulatory failure, the head and heart must be kept low to increase blood flow to these vital centers *—but only if patient has no injuries in these areas.* It is easy to burn or injure a shocked patient because his sensations are not normal.
If you are unable to free the victim, wait for the arrival of a wrecking crew. If only a limb or limbs are involved the trapped casualty may be given baking soda dissolved in water.	Don't use hot water bottles on crushed parts of the body. Don't give liquids if there are any signs of injury to the abdomen or stomach.	Most victims of crushing injuries develop shock, sometimes after they have been released from the wreckage. The most serious development is the cutting off of the blood supply to a crushed limb. This causes the muscles to die, and substances produced by the dead muscles poison the kidneys, ultimately causing death. Alkaline solutions such as baking soda or digestive powders, or water, should be given—as much as patient can drink.
Be sure patient is kept warm. Watch for signs of shock. If skull fracture is suspected, support head and shoulders a little. If conscious give water, hot coffee or tea.	DON'T move the victim. Moving victims with head, back or spine fractures may cause death. Don't try to set a fracture yourself. Don't try to straighten a fractured limb.	Severe pain, tenderness, swelling and discoloration are the first things to look for in a suspected fracture. If patient is unconscious, bystanders may have witnessed the injury and be able to give information. Special attention should be given to possible skull fractures, especially if blood is coming from the ear, nose or mouth. Fracture should be supported gently and improvised splints may be applied only if you are familiar with their use.
 A rolled newspaper makes a good improvised splint for the arm.	DON'T move the victim. Improper handling may turn a simple fracture into a compound one, and may puncture a blood vessel or seriously injure a nerve.	Administer treatment for shock—often severe in a compound fracture. If wound must be cleaned, use alcohol, rubbing away from fracture. If victim MUST be moved, first immobilize the fracture—that is, fix the damaged part so movement by the patient cannot cause the broken bones to move. Bed slats, pieces of wood or debris, or even a rolled newspaper may be used as splints in an emergency.
Wounds are subject to two dangers—infection and serious bleeding or hemorrhage. Remove clothing around wound, except when stuck to skin, and check bleeding with compress.	Never wash wounds with soap and water. Don't touch wound with anything but sterile material. Don't pull away pad or clothing—you may loosen the blood clot.	If necessary to clean wound, wash away from the area with alcohol. A mild tincture of iodine may be applied on and around the wounded area, using a sterile swab of cotton or cloth on a small stick. When the iodine is dry apply a sterile pad of gauze or a compress, taping firmly in place with adhesive tape. Never pour iodine on a wound and never make a second application once a wound has been dressed.
	Don't attempt to apply a tourniquet (left) unless you are trained in first aid! Don't wash or dress wound until bleeding has been stopped. Use pressure cautiously.	Keep victim lying down with bleeding part raised slightly. Try to check flow of blood with direct pressure compress first. If extreme arterial bleeding makes tourniquet necessary, apply over artery between wound and the heart. Slip pad under tourniquet before tightening and ALWAYS RELEASE TOURNIQUET EVERY 15 MINUTES. The tourniquet cuts off circulation to the part; if cut off for too long a time, gangrene sets in and the part dies.



This can be used for injury to eye.



The type of bandage at left may be used for injuries to the shoulder or chest.

This arm sling may be improvised from a large triangular bandage and used for fractures in connection with a splint.

Open bandage for chest or back (left) also may be made from a large triangular bandage. It may be used to hold compresses in place.

This marvelous new cold water starch costs about 1¢ to make a quart*

*of medium starch solution

only NIAGARA gives you these 3 savings

☑ **SAVES WORK**... there's no fuss, no mess, no waiting; with NIAGARA you make perfect starch instantly in cold water. And NIAGARA gives fabrics a beautiful finish, won't spot or streak the darkest colors. Makes ironing easier, too.

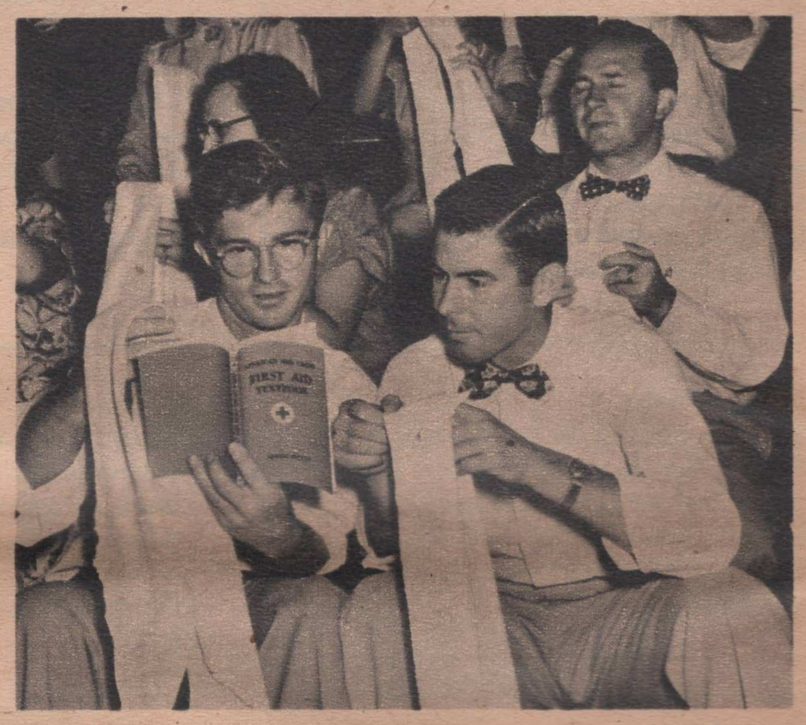
☑ **SAVES TIME**... nothing could be quicker... just swish NIAGARA® Starch in water from the tap... it is ready to use. Make as much or as little as you need. NIAGARA makes washing easier, the starch catches the dirt... floats it out in the washing.

☑ **SAVES MONEY**... remember, NIAGARA is all starch ... you add the water. One package gives you 20 quarts of medium starch solution! Try NIAGARA soon ... you'll love it.

All Philadelphia Police trainees must complete the first aid course to graduate.

First Aid Is a 'Must'

20 Million To Study It



Montgomery County high school physical education instructors learn first aid at Norristown. They will teach it to 2000 fellow teachers and to student body.

Road patrol crews of automobile clubs are included in the first aid training program. Here, a patrolman from the Keystone Automobile Club treats a "victim."

This gas station attendant is one of 20,000,000 citizens being trained in first aid.

Face These Facts

BY RICHARD GERSTELL

Author of "How to Survive an Atomic Bomb"

BEHIND the Iron Curtain there are atomic weapons. Also behind the Curtain are modern aircraft capable of delivering those weapons to any point in the United States. Delivery of the weapons could be made today, tomorrow, or at any other future date. We could blunt most raids launched from behind the Iron Curtain, but we could not stop them entirely.

This particular combination of facts offers a definite threat to our national security. The easy out is to ignore the threat and hope that it will go away. The sensible move is to face the facts and prepare.

Now is the time to begin to translate our long-talked-about civil defense plans into action. The immediate step should be prompt completion of a sound framework of organization. This framework must be capable of rapid expansion in the event of increasing emergency.

Should an enemy attack be made upon our nation, we may, or we may not, receive advance warning of it. And even with a good radar net, we cannot count on more than 30 minutes' warning.

Could Cut Loss in Half

But if we properly prepare our civil defenses—if everybody knows the key facts and everyone has a definite job to do — 30 minutes' warning should enable us to halve the losses otherwise to be expected.

Should an enemy attack us, his target would be the entire United States. His major strikes probably would be aimed at a few vital areas, but his over-all objective would be capture of the whole country.

For this reason, every part of the nation must prepare to meet the threat of aggression. But not every section of the country should make exactly the same preparations.

Our larger cities will have to plan against atomic explosions. Smaller cities more likely would be the targets for high explosive and incendiary bombs. Reservoirs, railways and isolated mills and factories must be guarded against sabotage. Rural areas ought to get ready to cope with enemy germ attacks aimed at livestock or food crops.

One Basic Pattern

In setting up these defenses, each separate community will have to take care of its own special problems. But at the same time, all areas must build on one basic pattern. Only in that way will each section be able to lend real help to the other. That's the secret of truly effective organization.

Regardless of where you may live or what you may do, civil defense depends upon you. You must learn exactly what modern weapons can do. You also must learn what they can't do. Most important, you must learn how to protect yourself.

To begin with, you must realize that atom-splitting is just one more way of causing an explosion. True, an atomic bomb holds more death and destruction than man has ever before wrapped in a single package. But there still are very definite limits to what one of them can do. Roughly, the same amount of damage could be caused by 325 tons of high explosive and 1000 tons of fire bombs.

Not even hydrogen bombs could blow the earth apart or kill us all by mysterious radiations. That is pure scare talk.

Blast and heat are the A-bomb's two greatest dangers. Except in low-level, or underwater, explosions, radioactivity runs a poor third.

The way to protect yourself from blast and heat is to get shielded. Simply put all the solid material you can between you and the bursting bomb. Steel, concrete and earth all have good stopping powers.

Cellar a Good Shelter

In a bomb shelter, in a subway or in the cellar of your own home, you most likely would be safe from both blast and heat. You probably would escape the bomb's powerful 90-second burst of radioactivity too.

You definitely won't need a Geiger counter, protective clothing or special instructions to live through an atomic attack. The real secret of survival is to use your head. Don't try to flee from the bomb and get yourself killed by panic.

Along with the myths about atomic weapons, you can dismiss all others you may have heard about new types of germs and poisons that supposedly will bring sudden death to whole cities or nations. They too are groundless.

Germ, or biological, warfare is merely a special way of attacking certain targets. It could be aimed at people, at livestock or at growing crops. Within rather narrow limits, it sometimes might be quite effective. But never will it kill every person, animal or plant in the line of attack. Disease germs simply don't have that power.

Wider Program Needed

Effective defense against biological warfare will call for expansion of our present system of public health protection. Water purification, food inspection, pest control and similar activities will have to be stepped up. And you will have to lend a hand in the program.

In times of increased emergency or all-out war, you may be required to report all unusual illnesses to your family doctor. You also may be required to take vaccinations or "shots" as a guard against certain kinds of disease. Good personal health must be one of your chief aims.

Just as with germs, there also are effective means of protection against "nerve gases," the new poison gases now so much talked about. There likewise are effective treatments for the injuries caused by them.

Neither atomic, biological nor chemical warfare means the end of all life on the earth. But unless you take the trouble to learn how to protect yourself from modern weapons and unless you and your family league up with your neighbors in civil defense, enemy attack on our nation needlessly will kill many people. You might be one of them.

AMAZING NEW DISCOVERY FOR RHEUMATISM, ARTHRITIS

No Faster Arthritic Pain Relief Known

SAFE..CLINICALLY TESTED

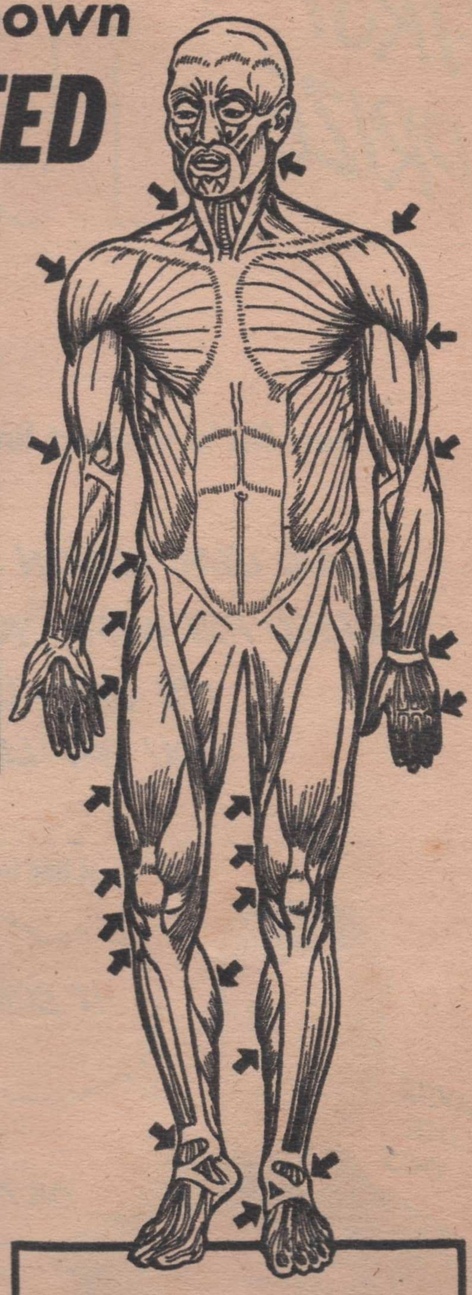
Stops Swelling Of Painful Joints...Contains Sensational New Research Discovery

NEW, SAFE, SCIENTIFIC TABLET

Not a Narcotic... Not Habit Forming... AT LAST THE STORY CAN BE TOLD! Science has turned its attention to relieving the agonizing pains of rheumatism and arthritis. The result of extensive research is the remarkable preparation IMDRIN. Long-time sufferers from rheumatism, arthritis, neuritis and gout may find IMDRIN gives glorious relief amazingly fast. Contains no dope or harmful drugs. Ask for IMDRIN at drug stores.

DEVELOPED AFTER YEARS OF EXTENSIVE CLINICAL TESTS

IMDRIN has been a closely guarded experimental secret before release for public use. Yes, medical men, after years of extensive tests, have proved conclusively that IMDRIN works internally toward amazing reduction of pain, heat, redness and swelling in the joints. Every victim of rheumatism, arthritis, neuritis, sciatica, gout, neuralgia, etc., should investigate this new development of modern medicine. Ask for IMDRIN at drug stores.



WHERE RHEUMATISM STRIKES... AND HOW TO DETECT IT!

Rheumatic and arthritic pain and inflammation may strike any of the indicated areas. (See chart above.) But these diseases have many forms and symptoms. All forms of arthritis and rheumatism are accompanied by pain, very often swelling and loss of function of the joints. Clinical test patients receiving IMDRIN were able to begin happy, comfortable living once the pain subsided and their confidence grew. IMDRIN reduced joint swelling and eased pain rapidly. IMDRIN is your greatest hope. IMDRIN may give you the same blessed results. Get IMDRIN today!

RELIEVES PAIN AND SUFFERING AFTER YEARS OF TORTURE!

**"I call IMDRIN a boon and you can understand why when I tell you that the pain which had tortured and crippled me was gone after I had taken IMDRIN. Now for the first time in years, I can move about without pain. Surely the thousands of unfortunates like me should be happy to learn about the blessed, fast-acting IMDRIN."*
A. C.
Chicago, Illinois

**"I had arthritis and rheumatism so bad I could hardly get around. Well, I had about given up hope when I saw your ad in the paper and bought a bottle of IMDRIN. I really think it's a wonder. I feel better with every dose I take. It seems like a dream to be free of so much pain."*
MRS. A. R. W.
Amarillo, Texas

**"Even though my daughter is a registered nurse she could not find anything to help her agonizing arthritic pains. She tried everything but nothing did her any good. Then she bought IMDRIN and she has had miraculous results. I am going to tell all my friends about the wonderful pain relief IMDRIN gives. It really is an amazing remedy."* *MRS. C. C.*
Kunkletown, Pennsylvania

How IMDRIN Helps You!

If you have suffered the tortures of rheumatic or arthritic pains, swelling and stiffness... if you get up mornings dreading the suffering the day may hold, and do it day after day, month after month, year after year... listen! IMDRIN may answer your problem of comfortable living. In case after case IMDRIN has proved its potency. IMDRIN is one of the fastest arthritic and rheumatic pain relievers known to medical science. Cases deemed almost hopeless... persons who suffered and waited and hoped for years were able to start living happy, comfortable lives. No other medicament for rheumatism and arthritis can make this amazing statement... and back it up with proven clinical records. Amazing new IMDRIN brings new hope of a better life for you... and it is as close to you right now as your nearest drug store. Get IMDRIN today. Use only as directed. If you don't agree that miraculous new, scientific IMDRIN is the greatest blessing you've ever discovered, return for your money back after first bottle. Get IMDRIN today—start living a pain-free life!

TODAY—START CONFIDENT, PAIN-FREE LIVING WITH AMAZING NEW, SAFE, AND SCIENTIFIC...

IMDRIN

IMDRIN contains no dope or harmful drugs... is not habit forming. Clinical tests prove it is one of the fastest pain relievers for arthritic and rheumatic sufferers known to medical science. Start using IMDRIN today. Don't miss the chance to enjoy pain-free living.

START A MORE NORMAL, MORE ACTIVE LIFE

Do as thousands of other one-time rheumatic and arthritic sufferers do for fast pain relief. Today... try the amazing, new scientific discovery... IMDRIN. You should feel better almost at once... start living a happy, comfortable life. Leading medical men endorse its beneficial effects as one of the fastest reliefs from arthritic and rheumatic pain known to medical science. Why suffer needlessly? Buy IMDRIN now!

**Posed for by Professional Models*

No Faster Arthritic Pain Relief

Listen to GABRIEL HEATTER'S Comments On The News Coast-to-Coast for IMDRIN! on Your Mutual Station

MONEY-BACK WARRANTY

IMDRIN is offered on this guarantee... the very first two weeks trial must satisfy or return for refund. This warranty applies to 72 tablet size only.
RHODES PHARMACAL CO., INC.

Sold at Druggists Everywhere

1106 Chances to win in $35,000 Lipton Soup Contest

FIRST PRIZE $10,000 in cash After Taxes!*

*Extra award for taxes made if entry is on official entry blank, or on plain piece of paper signed by your grocer.

IT'S THIS EASY!

Just fill in the last line of this Lipton Soup limerick:

SAID JIM, "LIPTON SOUP IS FOR ME!"
CRIED HIS WIFE, "YOU GET MORE, AS YOU SEE.
IT'S GOT FLAVOR AND ZEST;
YOU PAY LESS FOR THE BEST——
"

(Last line to rhyme with "me")

Now write your last line!

Get off to a good start by fixing yourself a steaming bowl of Lipton Noodle Soup or Lipton Tomato-Vegetable Soup for inspiration. Notice how it makes 50% more than most canned soups. That's economy! Enjoy that delicious country-kitchen flavor. Then finish the limerick in your own words!

Don't hunt around for fancy phrases—it's *what* you say, not *how* you say it, that counts. YOU may be the one to win $10,000!

When Lipton says $10,000 in cash, it means just that—you keep it all!

To the winner of the $10,000 first prize and the five winners of the $1,000 second prizes (whose entries are on official entry blanks obtainable from your grocer, or on plain paper signed by grocer), Lipton will award enough *additional money* to pay Federal and State income taxes on the prize money, leaving the winner the *full cash value* of the prize!

What an offer **Regardless Of Higher 1951 Taxes, You Collect The Full Prize Amount!**

1106 chances to win a cash prize

$35,000 in prizes offered by Lipton Soup

FIRST PRIZE . . . . . **$10,000 CASH PLUS enough money to pay Federal and State income taxes on your prize!***

5 SECOND PRIZES . . . . . **EACH $1,000 CASH PLUS enough money to pay Federal and State income taxes on your prize!***

100 THIRD PRIZES . . . . . **EACH $100 CASH. 1000 Prizes** . . . . . **$10 CASH**

IT'S EASY! MAIL YOUR ENTRY TODAY together with the front from a 3-pack carton of Lipton Noodle Soup or Tomato-Vegetable Soup, to LIPTON SOUP, Box 397, New York 46, New York.

GOSH, HONEY, WITH $10,000 WE COULD GET A PLACE OF OUR OWN AND A CAR TOO!
LIPTON
Now! with ENRICHED Noodles
NOODLE SOUP
A PREPARED SOUP MIX
3 PACKAGES
4 to 6 SERVINGS EACH
LIPTON
TOMATO VEGETABLE SOUP WITH NOODLES
3 PACKAGES
4 to 6 SERVINGS EACH

***REWARD!**
See your grocer!

To win the additional income tax award, be sure entry is on an official entry blank (obtainable only from your grocer), or on a plain piece of paper signed by your grocer.

Some hints to help you win

Remember, you get 50% more soup with Lipton than you get with most canned soups. That's right, 50% more! And . . .

Lipton Soup costs you less to begin with. You pay less for a package of Lipton Soup than you do for most canned soups. So you save money *two* ways!

Every drop has country-kitchen flavor. Lipton Noodle Soup: rich chicken broth with tender egg noodles enriched for extra nourishment. Lipton Tomato-Vegetable Soup: six tasty vegetables in rich tomato stock with those wonderful noodles.

You fresh-cook Lipton Soups yourself in just minutes, yet they taste like homemade soups that take hours to prepare.

They're wonderfully convenient for lunch, dinner, evening snacks, and hurry-up meals. Serve 4 to 6 in a jiffy, and so nourishing!

HERE ARE THE SIMPLE RULES

1. Print or write plainly your last line for the Lipton Soup limerick. Make your last line rhyme with "me." Get entry blank from your grocer or use a plain sheet of paper. Each entry must be original work of contestant submitting it.

2. Mail not later than March 11, 1951 to Lipton Soup, Box 397, New York 46, N.Y. Be sure your name and address are written plainly. Entries must be received not later than March 19, 1951. Submit as many entries as you wish, but be sure to send the front from a 3-pack carton of Lipton Noodle Soup or Lipton Tomato-Vegetable Soup with each entry. Use enough postage.

3. Contest open to any resident of the United States, except employees of Thomas J. Lipton, Inc., its subsidiary companies, its advertising agencies and their families. Contest subject to all Federal and State regulations.

4. Entries will be judged for originality, sincerity and aptness of thought by The Reuben H. Donnelly Corporation. Judges' decisions final. Prizes are listed elsewhere in this advertisement. Duplicate prizes awarded in case of ties. No entries returned. All entries, contents and ideas therein become the property of Thomas J. Lipton, Inc., to be used as it sees fit.

5. To the winners of the first prize and of the 5 second prizes there will be awarded enough extra money to pay Federal and State income taxes on their prize winnings, provided entry is submitted on official entry blank, obtainable only from your grocer, or on plain paper signed by your grocer. The additional amount of money will be computed for each such winner after he submits (to a representative duly appointed by Lipton) evidence as to the additional tax liability incurred by him by reason of the receipt of the prize.

6. Major prize winners' names will be announced about one month after the close of the contest over the Lipton Tea and Lipton Soup radio program: "Arthur Godfrey's Talent Scouts" (on CBS each Monday night). All winners will be notified by mail. If you want a complete list of prize winners send a stamped self-addressed envelope to address in Rule 2. Lists will be available about six weeks after the close of the contest.

Long Sleeves Are Safer

BY CYNTHIA CABOT

IN THE event of an atomic attack, clothing will be important only as a protective agent. Appearance will run a poor fourth to safety, comfort and convenience. In fact, an ideal outfit would be a set of light-colored coveralls, a wide-brimmed hat or hood, and a pair of work gloves.

The light material will absorb less heat and thus help prevent burns. The hat and gloves will protect the ordinarily exposed face and hands. And the coveralls, in addition to providing handy pockets, will offer overall protection.

Emergency Clothing

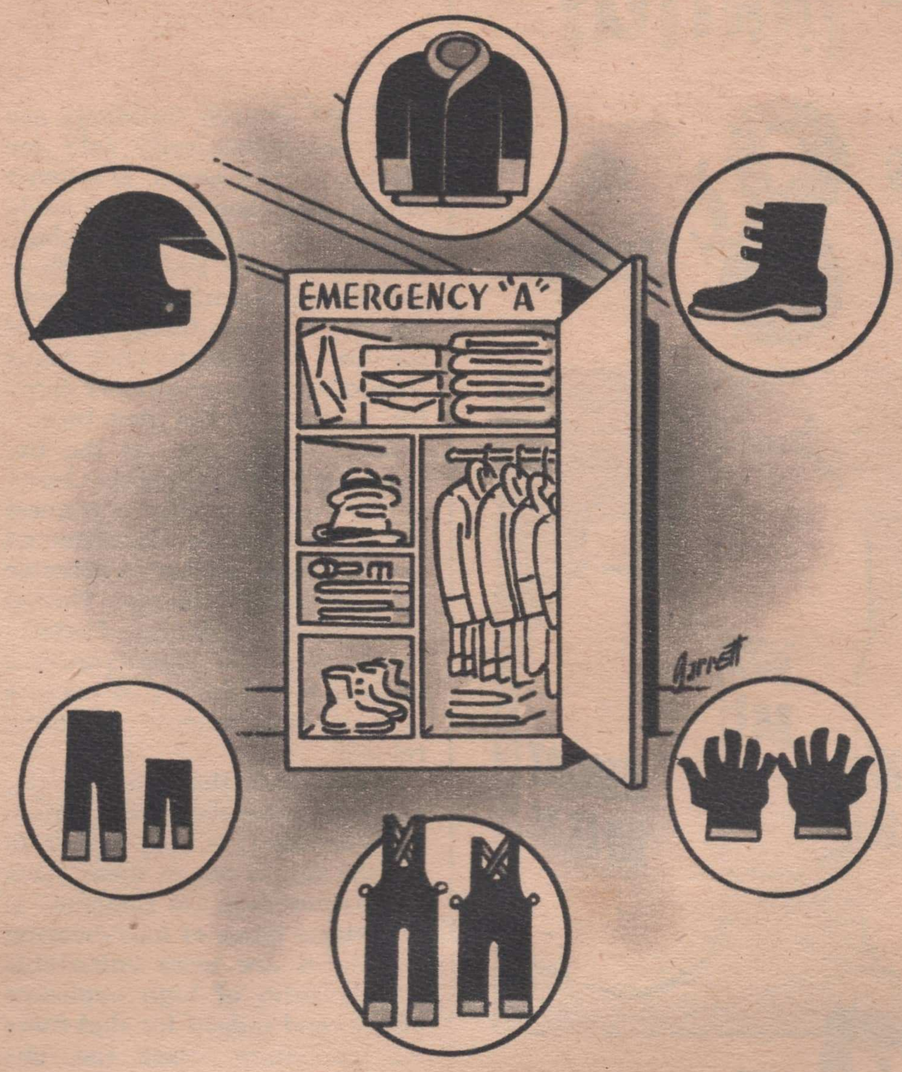
The best plan for a housewife is to set aside one closet or space for emergency clothing. This closet should contain the following: A pair of rubbers or other shoe covering for every member of the family. A sturdy pair of gloves for each. A hat or, even better, a hood for everyone. Work clothes for all. In winter the closet also should hold an old blanket or two, and warm outer clothing for the family. Don't depend on an electric blanket; you may have no power in your home.

Clothing that is worn outside after a raid should be kept outside. These clothes should be washed fairly often to rid them of possible lingering radiation. But don't wash them in the usual tubs or machine. Wash them in a bucket or pan that can be thrown away after being used a few times.

Men should form a habit of keeping their sleeves rolled down; women should wear long-sleeved dresses, stockings when outdoors, and wide-brimmed hats.

Both men and women should keep their hats on at all times while outdoors.

Don't plan to rush out and buy a lot of extras. Look around your house; you'll find most of the items mentioned above. But the most important thing is—be prepared. Have your emergency clothing in a convenient place; keep the space orderly. Just knowing it is there will make you feel safer and, if an attack does come, it may do a lot more for you.



Set aside one closet or space for family's emergency clothing.

SCOTTY HAS SWITCHED TO AL-PO because AL-PO is the best buy in dog food. AL-PO contains no cereals or other fillers. It is *all meat*, the *natural* diet for dogs, cooked in its own rich juices, and ready for use. Choice of beef or horsemeat. On sale everywhere. Adv.

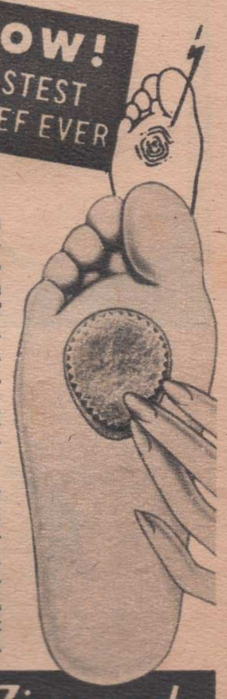
Callouses

Pain, Burning, Soreness On Bottom Of Feet

NOW! FASTEST RELIEF EVER

You quickly forget you have callouses, burning, soreness on bottom of your feet when you use *Super-Soft* Dr. Scholl's Zino-pads. These soft, fluffy, soothing, cushioning, protective pads instantly relieve painful pressure on the sensitive spot.

Used with the separate *Medications* included, Zino-pads speedily remove your callouses. Get this fast relief today. At Drug, Shoe, Department and 5 & 10¢ Stores everywhere.



Dr Scholl's Zino-pads

soothes throat in 5 swallows

It's wonderful how F&F relieves cough and throat irritation due to colds. Just let an F&F Cough Lozenge melt on your tongue and swallow the liquid medication. Repeat four times more. Works like a charm. Get a package today!

3 FLAVORS:
Original—Licorice—Cherry

The Window Problem

BY MARCIA STROUSSE

Supplement curtains, blinds, with heavier covering if possible.

THE best place to be during an atomic raid is at home. And the best home to be in is one where reasonable preparations have been made. Some of these preparations have been mentioned earlier, but all will bear repetition.

First give your home a good house-cleaning, collecting and throwing out all inflammable material, especially from the basement and attic. Either take down or protect fragile ornamental objects and insecurely anchored glass. Wire glass plus half-inch mesh wire is recommended as a guard for objects that may shatter.

Next you should work on your windows, which are the weakest parts of any house and may be the most dangerous. If your home is near enough to the blast, your windows will be shattered and the pieces blown into the rooms.

Ordinary shades, if pulled down, will help cut down the speed of flying glass; Venetian blinds, if closed, will do a better job. Both also will stop the bomb's heat flash, though a dark-colored shade may catch fire. Neither will stop initial radiation.

Cover Broken Panes

Naturally, if you can arrange to have heavier coverings made for the insides of your windows, and have sufficient time to put them in place, you will get greater protection.

For use after the blast, you should have old blankets, old awning canvas or sections of wallboard to block your broken windows. These are necessary to keep out cold, rain, fire sparks, and any radioactive dust that might drift in.

It's a good idea to get in the habit of keeping the blinds down during the day and evening for added protection. Too, if you're planning new blinds or draperies, get lighter colors; the bomb's heat flash will bounce off them.

Get your old blankets and pieces of canvas out now. Clean them; store them neatly and conveniently. In addition to making good window coverings, blankets are useful for personal coverings during an attack, for warmth afterward, and for first aid uses.

Answer His Questions

BY MILDRED HARDCASTLE, R.N.

ALMOST important thing in connection with caring for children during a bomb attack is knowing where they are. If they're in school, parents can be reasonably relaxed. For there they are under trained supervision and in most cases are in buildings structurally stronger than their homes.

If they're at home, you can personally supervise their safety. But while they are traveling to and from school, and during play periods, you will need some check-up and definite rules.

First, they should be told to follow the same route to and from school each day, getting special permission for any stops. Next they should be told just where to go—usually homeward—in the event of an alert signal.

School-age children usually are quick to learn rules and cooperate. But for the pre-school-age child, you must make a game of safety measures. Make the shelter area attractive to the child. Give him or her a toy or doll to hold; tell stories; sometimes candy or cookies may be dealt out.

It will be necessary to answer many questions as the civil defense program becomes more prominent in daily life. There is no precedent to follow, no birds-and-bees method of softening facts. However, there is a general attitude toward all children's queries that holds good. This is a willingness to consider what the answers may mean to the child and to try to phrase them so that he can understand.

Don't just say, "You're too young to understand," if your child asks what an atomic bomb is. Instead, you might say, "The atomic bomb is like a big bullet. . . . It won't be aimed at you or at our home. It will be aimed at buildings where guns are kept." These answers should allay fears.

This last, obviously, is the chief task of any adult. The best source of security for children is freedom from fear in the home, the feeling that Mom and Dad will be able to handle anything that comes up. But to give children this feeling, parents must first know the facts of the atomic threat themselves.

Cleanliness Is Safety

BY MARY ELLEN WATSON

SURVIVORS of an atomic blast won't be immediately concerned about the smartness of their appearance. But they should be concerned about personal cleanliness for baths and showers provide one of the best protective measures against the effects of lingering radiation. Ordinary soap and warm water will remove most of the radioactive dust from your body. Be sure to wash your hair every day during the danger period following the blast.

A few buckets can be filled with water, covered and set aside for washing. If you have no water, rub yourself clean with towels; this is better than nothing.

If you have been showered with dust from the explosion, take your clothes off, leave them outside and change to others. If you have only a small amount of water, use it to wash your face and hands or any other exposed part. Less important, but fine for morale, would be a convenient kit or shelf of toilet articles.

"Was A Nervous Wreck From Agonizing Pain Until I Found Pazo!"

Model Photo

—says Mrs. A. W. San Antonio Texas

YES! AMAZING PAZO HAS BROUGHT GLORIOUS RELIEF TO MILLIONS!

Far too many suffer, in secret, from the miseries of simple piles. Yet, as millions have discovered, you can speed amazing relief from this agony with soothing Pazo.* Pazo acts to relieve the pain and itching *instantly*. Soothes inflamed tissues. Helps prevent soreness, reduce swelling. You get real comforting help. So don't suffer one moment of needless torture from simple piles. Get Pazo from druggists for wonderful relief. Ask your own doctor about it. Suppository form—also tubes with perforated pipe for easy, thorough application.

**Pazo Ointment and Suppositories®*

Have you heard...

5 quarts of nonfat milk for as low as 8¢ a quart

FROM

1 package of

STARLAC

Wonderful for Drinking— Cooking and Baking!

You'll be thrilled when you discover how wonderful Borden's Starlac is!

Think of it! *Starlac is milk—with only the water and fat removed.* So Starlac gives you *all the valuable B vitamins, proteins, calcium and other important minerals found in milk! Yet Starlac costs you only about 8¢ a quart!*

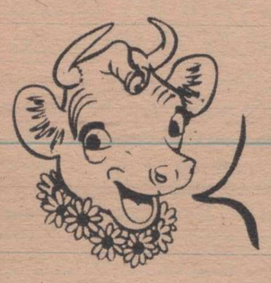
Starlac is easy to use

Package needs no refrigeration. You can use as little or as much as you need each time. Just add water to Starlac, beat or shake! You'll have all the nonfat milk you need for drinking—cooking—baking!

U. S. Dept. of Agriculture says:

"Nonfat dry milk is a fine, creamy-white powder that is obtained by removing the fat and water from fresh, sweet liquid milk. It contains all the original milk except the fat and fat-soluble substances."

©The Borden Company



Starlac is milk—with only the water and fat removed!

Get Starlac at your grocer's today!

Our Churches Must Plan

BY DONALD SCOTT

MOST church buildings are not structurally safe for shelter in the event of atomic attack. No plans should be made to use them as community shelters—or for the shelter of their members if warning of impending attack comes during hours of service. At least, no such plans should be made until after careful analysis of the structure.

Some weeks ago, at the instance of the Philadelphia County Defense Council, a request for British advice was directed to Sir John Hodsoll, Director General of Training, United Kingdom Civil Defense Department. Sir John, a veteran of a quarter of a century of experience in civil defense planning, replied:

"I am afraid that there is only one answer for the type of building you describe, and that is to get the people out of them. Our experience here (in England) is that these types of load-bearing structures are most vulnerable to any form of high explosive attack, and indeed for that matter incendiary attack too, because we found the small incendiary bomb was always getting lodged somewhere up in the roof where nobody could get at it and we have had so many of our churches burned in that way.

"There is nothing one can do about these load-bearing buildings, which are most dangerous, and it is quite essential to get the people out."

The veteran Briton, whose views on civil defense will be found elsewhere in this magazine, speaks from experience in London and other cities of England subjected to conventional high explosive raids.

U. S. Concurs in View

But there is an official answer on the vulnerability of the average church structure to the "blast pressure" of an atomic attack. It is contained in *The Effects of Atomic Weapons*, published last August under the sponsorship of the U. S. Department of Defense and the U. S. Atomic Energy Commission.

Under the heading, "Buildings with Load-bearing Walls," the manual states:

"Small buildings of this type with light walls collapsed. Larger buildings with cross-walls and of somewhat heavier construction were more resistant, but failed (collapsed) at distances up to 6200 feet (about 1.17 miles from the point of explosion in the Japanese cities of Hiroshima and Nagasaki). Cracks were observed at the junction of cross walls and side walls when the buildings remained standing.

"It is quite apparent that this type of building possesses none of the characteristics that would make it resistant to collapse when subjected to heavy lateral load."

Many Churches Are Old

Many Philadelphia churches are old. Few have reinforced concrete or steel frame walls. Many have lofty walls which bear the load (hence the name "load-bearing") of high vaulted roofs. The walls generally are of brick or masonry. Most churches have numerous and large windows which would shatter with murderous effect.

Continuance of all regular church services is even more to be desired under the threat of enemy attack than before. It was the British experience that thousands who previously had not felt the need for organized worship or individual supplication did so under the stress of emergency. The churches became towers of strength in girding the people to endure the privations and terrors of war.

It therefore is recommended that every church in a critical target area—and that means the entire Philadelphia metropolitan area — organize, through appropriate congregational or parochial action, a defense committee or council, headed by a defense co-ordinator, to do the following:

1. Consult a competent engineer (almost every church group has at least one among its membership) as to the structure of the church building. The weapons effects handbook, obtainable from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., for $1.25, will prove invaluable to the engineer.

2. Determine, on the basis of such official data, whether the church is a safe structure in the event of attack.

3. If it is not, plan for the evacuation of the church instantly upon receipt of a public warning of impending attack.

4. If there is a public shelter nearby, it should be determined whether it has the capacity to accommodate the membership of the church in addition to the people of the immediate community.

5. If no such public shelter has been selected, the church should take the initiative in designating one, if possible.

6. If no public shelter is available, and the church edifice is considered unsafe, the church membership should receive the same instructions given the public caught in the open by atomic attack. That is, leave the building and "hit the dirt," taking whatever cover is available.

7. A careful survey should be made of the membership and plans laid for the special care of the aged, the handicapped and unaccompanied children.

8. Evacuation wardens should be appointed for the adult church membership, and particularly for the Sunday school or other routine activity which brings children and young people within the church structure.

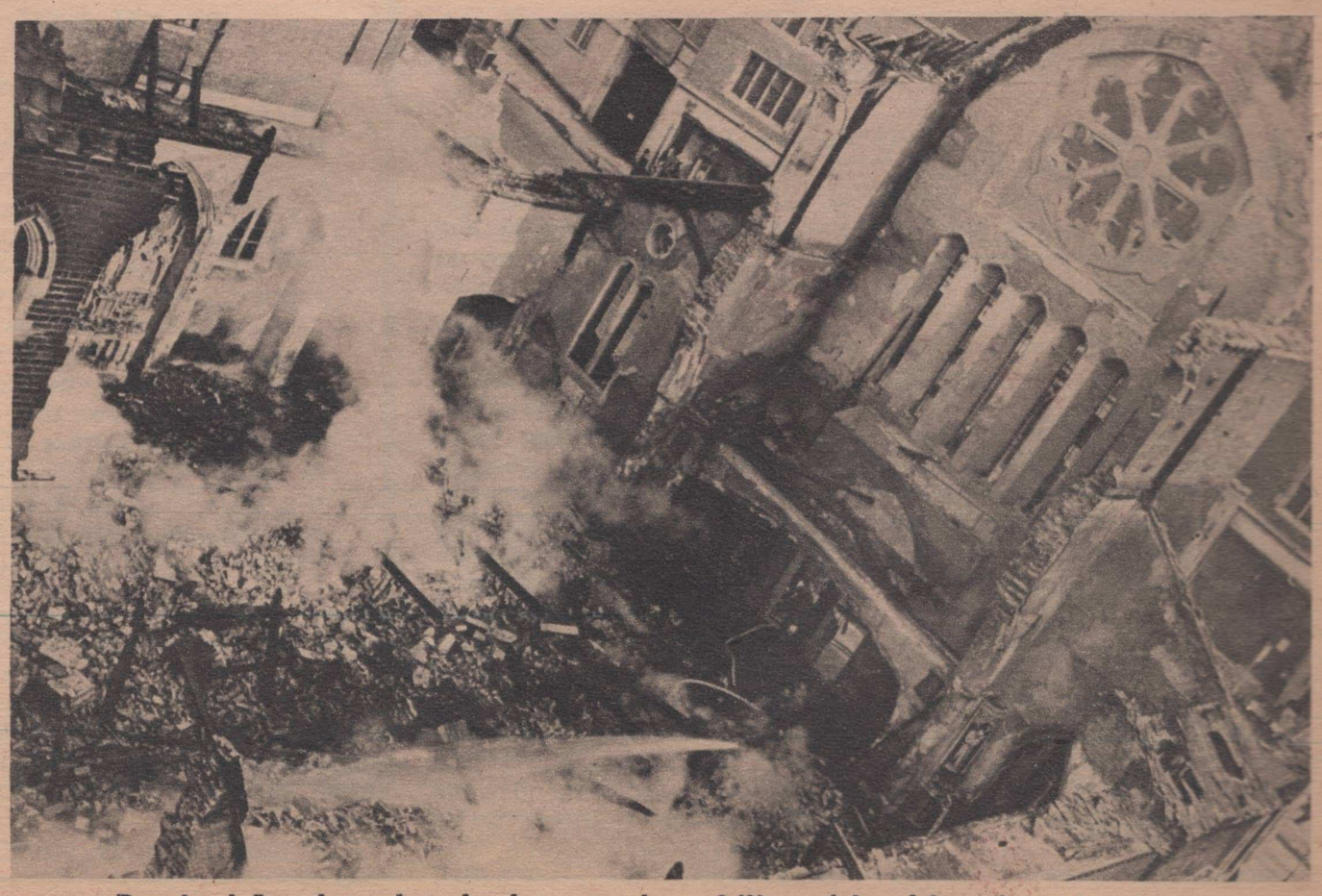
9. The church membership should be advised in detail of all plans, and plans should be explained carefully and repeatedly both by the defense co-ordinator and the clergy.

10. After the best possible plan has been prepared, discussed and approved, the county or municipal director of defense should be advised.

Church as a Shelter

11. It is possible that a church structure will survive attack. It then becomes useful as a temporary shelter for evacuees from the devastated region. Many churches have large basement areas with excellent cooking and sanitary facilities. If organized groups in the church plan how to use the church as a shelter, estimating how many could be fed and housed, or how many casualties could be accommodated, commandeering of churches by civil defense groups other than the church membership will be avoided.

Intelligent planning in advance, based upon the known facts of the effects of modern weapons, not only will enable churches to reassure their congregations; it will strengthen them to assume the great and vital ministry to people sorely pressed for aid and spiritual guidance in trying times.



Bombed London church shows vulnerability of load-bearing structures.

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Give her an Elgin American gift—the *sure* way to make her truly *your* Valentine. Luxuriously lovely compacts . . . deep-glowing simulated pearls . . . ultra-fashionable "Magic Action" lighters . . . intriguing Lite-O-Matics . . . sophisticated matched compact and lighter ensembles. Give her an Elgin American — she'll give you her heart.

Elgin American gifts are priced to fit every purse, Five to Five Hundred Dollars.

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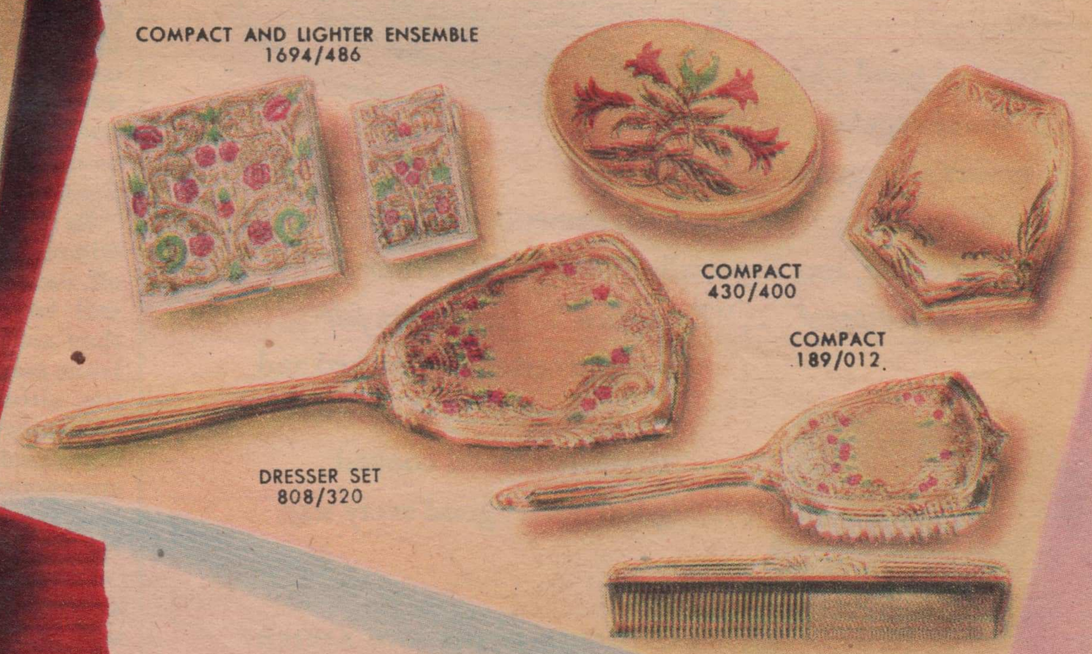
STYLED BY ELGIN AMERICAN
THE COMPANION LINE FOR THE THRIFTY
PRICED FROM $2.95 UP



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"Soaping" dulls hair— Halo glorifies it!

Not a soap, not a cream—Halo cannot leave dulling, dirt-catching soap film!

Gives fragrant "soft-water" lather —needs no special rinse!

Removes embarrassing dandruff from both hair and scalp!

Halo leaves hair soft, manageable—shining with colorful natural highlights!

Yes, "soaping" your hair with even finest liquid or oily cream shampoos leaves dulling, dirt-catching film. Halo, made with a new patented ingredient, contains no soap, no sticky oils. Thus Halo *glorifies* your hair the very first time you use it. Ask for Halo —*America's favorite shampoo*—at any drug or cosmetic counter!

Halo reveals the hidden beauty of your hair!

"Good to feel good"

PRUNES DO IT FOR YOU!

You feel good when you're regular . . . and prunes are a gentle and natural aid to regularity. They really do something for you. Good eating, too. Especially SUNSWEET Prunes. *Tree-ripened . . . "Tenderized" . . .* sealed in *foil wrapped* cartons . . . packed and guaranteed by the *growers themselves.* Good cooked . . . good raw . . . good every way.

CALIFORNIA PRUNE AND APRICOT GROWERS ASSN • SAN JOSE, CALIF.

SUNSWEET "Tenderized" Prunes, Apricots, Peaches — also SUNSWEET Prune Juice

Fortunate families will be those with camping equipment and Boy Scout sons . . .

Give Some Thought to Food

BY VIRGINIA CHENEY

AFTER the first shock of a catastrophe has passed, thoughts begin to turn to familiar things. Something to eat is high on the list.

There is something comforting and soothing about food, particularly warm food and familiar food. It may not be easy to provide after a bombing, however, for cooking will be difficult under the best of conditions if the usual fuel is lacking. In fact, the families with camping equipment and a son who has had Scouting experience and knows how to cook over a camp fire will probably be the envy of the block!

In cases of serious disaster where water and fuel are shut off, canteens and feeding centers will be set up in areas where they are needed. But such canteens cannot be set up in a minute, although we all bow to the efficiency and skill displayed by organized relief services in past emergencies and have confidence that they can repeat their helpful performances.

It may be several hours to two or three days before a canteen will be in working order. During that period members of a family are going to look to mother to feed them.

A great many homes are normally well stocked with foods. We are referring to the homes where a few extra guests for dinner mean nothing to the chief cook. Such a home probably will have enough food on hand to see the family through the waiting-until-the-canteen-is-set-up period. But other homes, especially where storage space is limited and the homemaker is in the habit of shopping almost daily, will find they have quite a problem.

List Emergency Foods

If a homemaker will sit down and think, she will probably come up with a list of foods that will sustain her family for a three-day period. The foods should be high in calorie value to conserve storage space, but they should also be foods that her family likes. Above all, they should be foods that can be eaten without any preparation, that are even palatable right out of the can and unheated, if necessary.

The list of one homemaker will vary from that of another, depending upon the food requirements of her family. For instance, a family with small children will think in terms of more canned milk than a family of adults. A family that includes grandpa will possibly include more soft foods. A family that includes a person on a restricted diet should certainly include foods that are high in importance on his list of requirements.

After you are satisfied with the list of foods you want for your family, buy them, then use them. Replenish your emergency shelf weekly so that there is a constant turnover of the canned products. This will not only keep the foods fresh and good, but will prevent wasteful hoarding. Because the foods you are storing against an emergency are foods your family likes, you will have no difficulty working them into your menu—just replace each com-

If power fails, frozen foods may last 36 hours.

. . . who have experience in cooking over a campfire.

modity as you use it and keep your emergency shelf up to date.

To be on the safe side, it is smart to store emergency foods in the basement, or below ground. It might also be advisable to store the food in several different parts of the house, and a few cans in the garage might not be amiss.

In selecting foods for your emergency shelf, you will be interested in this statement made by Brig. Gen. James P. Cooney, chief of the Radiology Branch, Atomic Energy Commission: "Canned foods are not affected by the radioactivity generated by atomic bomb explosions and, if they survive the bomb explosion and fire that follows, canned foods and other well-packaged foods would be the only safe foods to eat." General Cooney cautioned in his statement that the outside of each can should be carefully washed before it is opened to remove any radioactive dust.

Insulate Frozen Foods

Food for storage should, of course, be non-perishable and not frozen. Electric power would probably be shut off in case of emergency, rendering foods in freezers unfit for consumption after a few days. While food that is exposed at the time of an atomic blast is probably rendered unfit to eat, we have reason to believe that food stored in a home freezer or freezer locker plant, or in a refrigerator, would be safe to eat.

In the case of frozen foods and lack of electric power, we are reminded of the violent windstorm late in November that shut off electricity in many areas. A great many home freezers were so low in temperature at the time the power went off that the food in them remained frozen and good for as long as 36 hours, and in some cases even longer. A thick mat of newspapers or a heavy wool quilt tucked over the frozen foods helped to insulate them and kept in the cold a lot longer. Work quickly at such a time to let in as little warm air as possible.

Stove May Be Useless

The modern and efficient gas or electric stove that you have learned to depend upon so much may become just another piece of furniture if the fuel should be shut off.

Regarding emergency foods, consider those that can be eaten cold. Soups, baked beans, canned Italian spaghetti and meat balls, corn beef hash are examples. These foods are all better when hot, but in an emergency they would taste mighty good cold, too.

Just to be on the safe side, you might store an extra supply of wood inside the metal grills of your outdoor fireplace and a few extra cans of tightly sealed canned heat in the basement.

We can borrow a trick from the cowboys on our Western ranges and keep an extra supply of canned tomatoes on hand. To tide them over periods when water was not available, the cowboys shook the canned tomatoes until the pulp broke up into a liquid, then drank the juice. It was a good substitute for water.

Smart mothers know meat is twice as important to babies*

...feed Swift's Meats for Babies every day!

*We grown-ups count on meat for the repair of our bodies. Baby thrives on meat for *two* important reasons. *Growth* as well as repair. Meat provides the building blocks (complete, high-quality proteins) baby needs for his rapid growth. Your baby will probably triple his birth weight in his first year alone. So you see how *doubly* important it is to start him *early* on that daily serving of Swift's Meats for Babies!

Tests show babies thrive on Swift's Meats for Babies—famous for needed proteins, B vitamins and food iron. Babies are healthy, satisfied—have better resistance to colds and infection. Six tempting Swift's Meats: beef, lamb, pork, veal, liver and heart. Ready to serve at about *half* the cost of home-prepared meats. Also Swift's Chopped Meats for Juniors.

ACCEPTED COUNCIL ON FOODS AND NUTRITION AMERICAN MEDICAL ASSOCIATION

Only the finest Meats for Babies are labeled **Swift's**

SWIFT ... *foremost name in meats... first in Meats for Babies*

In the testing station set up at Allentown General Hospital, medical technicians obtain blood for test by a pin-prick on one finger. One hitch was a shortage of technicians.

Why Didn't Your Mother Give You Amm-i-dent Tooth Paste?

Too bad! This child has not had the benefit of ammoniated protection against decay.

"Just another exaggerated claim" this girl's mother thought to herself, when she read that Amm-i-dent ammoniated Tooth Paste could reduce tooth decay. She didn't even bother to call her dentist, who could have told her about Amm-i-dent. She just kept on buying the same tooth paste with which her family had been brushing—and having new cavities—year after year.

More dentists recommend Amm-i-dent

And now, too late, she is sorry. At her child's regular dental check-up—*more cavities!* She wishes she had followed the advice of the dentists of America. They recommend Amm-i-dent Tooth Paste and Powder more than any other dentifrice. Surely these men must know best of all what is right for your family.

• • •

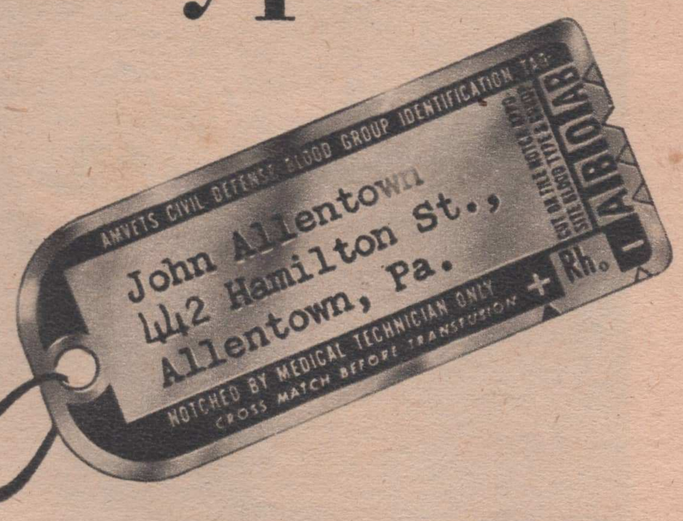
Does Your Present Tooth Paste Do Anything To Help Prevent Cavities?

No ordinary tooth paste, without ammoniated anti-decay ingredients, can do much to help prevent cavities—beyond what the simple act of brushing will do. But Amm-i-dent supplies *for many hours* the ammonia content found lacking in the mouths of people who suffer tooth decay. And you don't have to change your brushing habits. Regular brushing at your regular time, with Amm-i-dent, helps prevent cavities.

Her mother was too "smart" to believe the ads that told her...

Amm-i-dent Helps Prevent Cavities!

Allentown Types Its Blood



Tags bear information to help medical people give immediate treatment.

THE Amvets have a pretty good idea in their proposal to blood-type everyone in the U. S., but it can't be done overnight. Authorities say that there isn't enough typing serum in the country to take care of the Philadelphia population alone. It will take years to acquire enough for the whole U. S. In their recent test in Allentown, Pa., the Amvets said 100,000 persons were typed in about two weeks. Each was given a plastic blood-type tag. A controversy over the merits of plastic or metal as material for such tags continues in civil defense circles.

Boy Scouts Barry Heiser (center) and Paul Ruch visit Mrs. Harry Keller as a part of the campaign to arouse interest in the blood-tagging.

Like most children, 2-year-old Ann Stafford was frightened more by the sight of the small drop of blood than by the almost unfelt pin-prick.

Do false teeth come loose after drinking hot coffee?

"Fluid-resistant" dental adhesive holds dentures tighter . . . ends fear of slipping plates for thousands . . . lets them eat foods like corn, steak and apples, again!

HOW OFTEN IT HAPPENS! A flood of breakfast coffee hits your dentures—softens and weakens your dental adhesive! By lunchtime, you either have to apply new adhesive—or pass up corn, steak and other foods you love!

This "melting" action of coffee and other liquids in the mouth is a principal reason why many dental adhesives lose their grip.

But you can keep dentures in place, really tight—with Staze, the "fluid-resistant" dental adhesive! Staze contains "Aquatrol," which helps prevent the penetration of moisture!

Staze is a homogeneous gel of a particularly viscous, binding gum. It "takes hold" almost instantly . . . and thanks to "Aquatrol," holds your plates *tighter* and *longer*. With Staze, thousands again chew favorite "hard-to-chew" foods. Staze is easy to apply, pleasant to taste.

Ask for Staze—by name—at any drugstore.

Doctors report spectacular relief for RHEUMATIC PAINS at cost of less than $1

Here's wonderful news for sufferers from rheumatic pains. When doctors tested this new remedy on a large group of patients, a single application brought blessed relief in the amazing percentage of cases shown at right. The doctors proved there are scientific reasons why the remedy produced such relief:—

Doctor's drawings show how Sloan's works

Above drawings, made by a physician, are based on infrared photos showing the blood-vessels BELOW the skin-surface. Note how the blood-vessels below the surface expanded in the area treated with Sloan's. This extra supply of blood creates comforting warmth *in the tissues*, helps to flush away waste matter and to bring extra *health-restoring* blood to the painful area. With scientific instruments, doctors proved this effect can go deep down . . . as much as an inch below the surface . . . *down where the pain is*. Do you wonder, then, that these doctors rated Sloan's Balm as more effective than any other remedy tested?

No matter what else you do for your rheumatic pains—whether you use internal remedies, diathermy or diet—also apply Sloan's Balm to bring comforting warmth and extra supplies of health-restoring blood to painful tissues. It's so pleasant to use. Only 75¢ a tube.

Just one application brought relief in this amazing percentage of cases:

ARTHRITIS PAINS	61%
NEURALGIC PAINS	92%
SPRAINS	100%
BACKACHES	51%

(as shown by doctors' records)

Whatever internal remedy you take, also use

SLOAN'S BALM

externally

"Wonderful" says Joan Blondell

How to Lose Weight and Look Lovelier

Now! Lose weight *the way* Nature intended you to! A quick natural way with no risk to health. With the Ayds Plan you should feel healthier, look better while reducing—and have a lovelier figure!

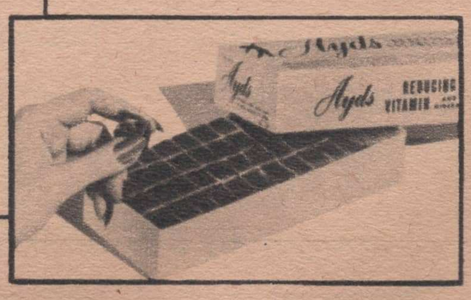
When you take Ayds before meals, as directed, you can eat what you want . . . all you want. Ayds contains no harmful drugs . . . calls for no strenuous diet.

Ayds is a specially made candy containing health-giving vitamins and minerals. It acts by reducing your desire for those extra fattening calories . . . works almost like magic. Easily and naturally you should begin to look slimmer, more beautiful day by day.

Users report losing up to 10 pounds with the very first box. In fact you must lose weight with the first box ($2.98) or your money back.

SLIM THE WAY THE STARS SLIM

● "Try reducing the Ayds way," says lovely screen star, Joan Blon dell. "I know you will be as delighted as I am because you'll get results so easily and pleasantly. So many of my friends—movie stars here in Hollywood—are taking Ayds."



The Loveliest Women in the World take AYDS

RELIEVES
HEADACHE
NEURALGIA
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FAST

Here's Why . . .
Anacin® is like a doctor's prescription. That is, Anacin contains not one but a combination of medically proved active ingredients. Anacin is specially compounded to give FAST, LONG LASTING relief. Don't wait. Buy Anacin today.

NEW MINTS Medically Proven
Quickly RID STOMACH of GAS

Do you ever suffer stomach gas, heartburn, from acid indigestion? Get amazing new BiSoDoL Mints for fast relief. Safe, gentle. BiSoDoL® Mints give longer-lasting relief than baking soda—yes, hours of relief. Refreshing, minty flavor sweetens sour mouth, stomach. So relieve heartburn, upset stomach, from too much food, drink, smoking. Sleep all night long when acid indigestion strikes. Carry new BiSoDoL Mints for fast relief—anywhere, anytime. 10¢.

NOW TRY ALL THREE TAMPONS

YOU OWE IT TO YOURSELF to try all three nationally advertised tampons. We urge you to do so because we feel sure you'll like Meds best . . . will continue to use Meds, the Modess tampon.

YOU'LL FIND MEDS easier to insert because of the improved applicator.

YOU'LL LIKE MEDS because they're so comfortable . . . give you assurance, peace of mind. Meds are accepted for advertising by the Journal of the American Medical Association.

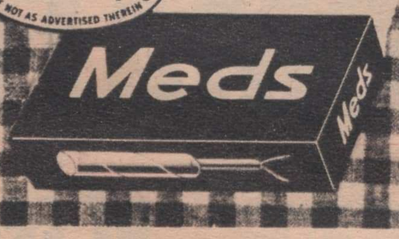
YOU'LL LIKE MEDS, the doctor-perfected tampon, because they eliminate pads, pins, belt . . . end chafing, odor . . . because they're the sanitary protection that's worn internally. Because we're so sure you'll like Meds best, we'd like you to try them at our expense.

FREE! For a free sample of Meds in plain wrapper with easy directions, send this ad with your name and address to Miss Crenning, Personal Products Corp., Dept. PI-6, Milltown, N. J. Check size desired —Regular ( ), Super ( ), or Junior ( ). Only one package to a family. U. S. only.

Go Meds . . . Go Merrier with the Modess tampon

Guaranteed by Good Housekeeping — Replacement or a refund of money if not as advertised therein

Acceptable for advertising in the Journal of the American Medical Assn.



"My morning kiss of Suave

MAKES MY HAIR
SO MANAGEABLE
SO RADIANT!"

Your hair looks, *feels* so heavenly soft, so caressable with Suave—yet *stays* beautifully arranged, perfect. No slicked-down "hairdressing" look! Just a morning kiss of SUAVE is all you need to keep even "problem" hair beautifully obedient, adorably soft . . . radiantly alive with glowing highlights. Your hair will whisper how lovely you are! Not a hair oil, contains no alcohol. SUAVE outsells ALL women's hairdressings! 50¢, $1

created by Helene Curtis
foremost name in hair beauty

"I mean arduous hours of training in dirty, grimy, exhausting jobs."

Alton C. Miller

Hard, Costly Road

And It Means "Good-bye to Business as Usual"

BY COL. ALTON C. MILLER
State Defense Director

VICTORY on the fighting fronts in modern war requires a total mobilization of the armed forces, backed up by an industry capable of maintaining under all circumstances a continuous flow of weapons and materials to the fighting fronts.

Civil defense is the force that *assures* those weapons and materials to the fighting fronts.

Civil defense requires the total mobilization of the home front—manpower and womanpower, public and private resources.

Mobilization begins with the individual. It is not *his* job, but *my* job; not *their* job, but *our* job. It begins with *me* and extends upward in unbroken association through *my* family, *my* community, *my* county, *my* area, *my* state to *my* country.

It will work upon one condition, and one only: if those in command and those in the ranks, without exception or exemption, realize that the prize at stake is survival and are prepared to make the sacrifices to fight for that stake.

When I say "prepared," I mean arduous hours of training in dirty, grimy, exhausting jobs. I mean "good-bye, business as usual . . . good-bye to most of the quiet luxuries of peace."

The first step is a calm appraisal of what we face, as a people. Let me make that appraisal briefly, possibly at the risk of repeating what may be said elsewhere in this text.

Our nation has a known, resourceful, powerful and ruthless enemy.

He has the means to attack us.

The enemy has the long-range purpose to destroy us.

Initiative as to the time and means of attack lies with him.

The demand here on the home front, therefore, is not merely for an organization to repair the ravages of an enemy's attack and thereby to deny him the victory. The demand is to provide an organization so well trained, so tightly-knit, so commanded and controlled as to make attack itself an uneconomic and futile expenditure of the enemy's resources.

This is the objective of your state headquarters. I recognize this as a combat command in the home front war for survival.

Selfless Devotion Needed

A detailed enumeration of what we will need to make the command effective would exhaust volumes. It is not beyond our capabilities, but to achieve it will require the same kind of burning, selfless devotion to the concept of a free society as that which has made our own Valley Forge a lodestar for free men.

Some broad statement of the requirements may be made. In Pennsylvania, we will require 3,000,000 men and women trained in at least basic first aid. Of these, a minimum of 1,500,000 must be in the organized civil defense forces. If manpower demands of the armed forces and industry follow the current trend, the majority of the 1,500,000—possibly 60 percent of them —will be women.

If this trained civil defense corps is to be made effective, it must have trained leadership.

In civil defense, trained leadership can be created only by an exercise such as that in which Philadelphia is now engaged. There can be no substitute for it. Mistakes will be made. The major purpose of the Philadelphia exercise, in fact, is to discover the mistakes and correct them.

If we are given time, Philadelphia should think in terms not merely of a single exercise, but of a succession of exercises, building steadily toward what, in the armed forces, is spoken of as "combat readiness."

Meanwhile, there must be no lessening of emphasis on the western end of the Commonwealth, which is just as critical a target for a bold enemy as the east.

Pittsburgh and her supporting area must go through the same months of disciplined effort as that through which Philadelphia's civil defense organization is now passing. After Pittsburgh, other areas of the Commonwealth must do likewise.

There is no royal road to civil defense preparedness. It is a hard, grueling, costly road. Any civil defense official who infers that the job ahead is casual, that it can be done cheaply or without sacrifice, that it can be successful without profoundly disturbing and disarranging our way of life, is guilty of a kind of treason.

It commands the best we have, and all we have—for the duration.

You'll tip your hat to this topping!

Rich and delicate...it's the world's most famous cream cheese...Philadelphia Brand *whipped!*

TWO POPULAR SIZES: 3 oz. a favorite for 70 years

½lb. saves you as much as 12%

Enjoy the **KRAFT TV THEATRE** Brilliant drama every Wednesday evening, NBC-TV.

Look for the red Kraft K. Only Philadelphia Brand Cream Cheese has it on the package!

Other cream cheeses are in *similar* blue and silver packages. To help you pick the *real thing* at a glance, look for the red K on every package of famous Philadelphia Brand.

TRICK FROM A TRICORN. George Washington, his cherry tree, his three-cornered hat and famous "Philadelphia" Cream Cheese provide the inspiration for this dandy dessert. Easy to fix, too! Cut unbaked pastry into circles about six inches in diameter. Prick with a fork. Cut heavy aluminum foil into circles the same size. Place pastry circles on foil circles, and shape into triangular shells by pressing the foil into three-cornered molds. Bake in hot oven, 425°, until done. Cool and remove the foil molds. Heat cherries, sweeten to taste, thicken slightly with cornstarch. When cool, fill shells.

THE TOPPING TRICK: Add a little milk to rich, delicate Philadelphia Brand Cream Cheese and whip with a spoon until light and fluffy. Pack into a pastry tube; force a rosette of this refreshing, creamy-white topping onto each tricorn.

CORRECTION! Some folks have the mistaken idea that just *any* cream cheese is "Philadelphia." "Philadelphia" is *not* a *type* of cheese; it is the *brand name* of the world's most famous cream cheese. Philadelphia Brand is *so superior* it outsells all other brands of cream cheese combined. Look for the red K and insist on *genuine* Philadelphia Brand Cream Cheese.

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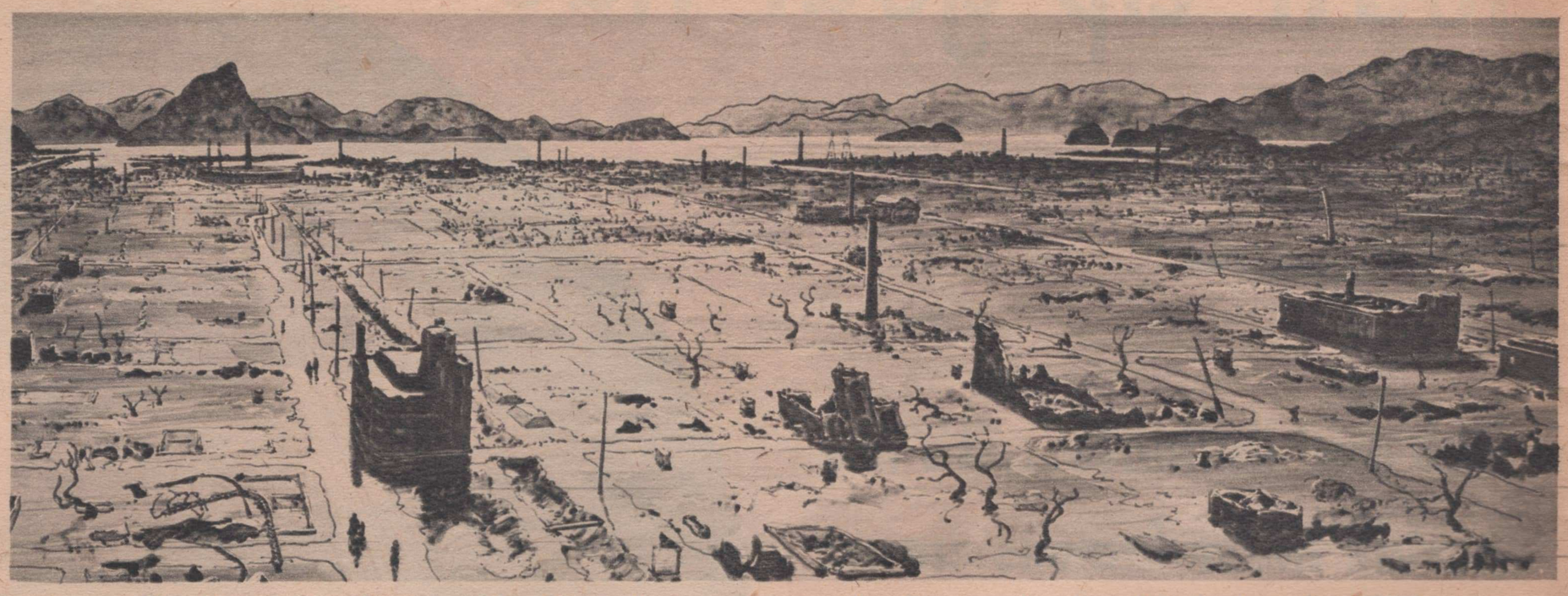


Hiroshima after the atom bombing—from a painting by Commander Standish Backus, Jr., USNR.

Hiroshima: Flash, Then Twilight

BY JOHN HERSEY

Reprinted from "Hiroshima" by John Hersey by permission of Alfred A. Knopf, Inc. Copyright 1946 by John Hersey. Originally published in the New Yorker.

THEN a tremendous flash of light cut across the sky. Mr. Tanimoto has a distinct recollection that it traveled from east to west, from the city toward the hills. It seemed a sheet of sun. Both he and Mr. Matsuo reacted in terror—and both had time to react (for they were 3500 yards, or two miles, from the center of the explosion).

Mr. Matsuo dashed up the front steps into the house and dived among the bedrolls and buried himself there. Mr. Tanimoto took four or five steps and threw himself between two big rocks in the garden. He bellied up very hard against one of them. As his face was against the stone, he did not see what happened. He felt a sudden pressure, and then splinters and pieces of board and fragments of tile fell on him. He heard no roar . . .

When he dared, Mr. Tanimoto raised his head and saw that the rayon man's house had collapsed. He thought a bomb had fallen directly on it. Such clouds of dust had risen that there was a sort of twilight around.

In panic . . . he dashed out . . . In the street, the first thing he saw was a squad of soldiers who had been burrowing into the hillside opposite, making one of the thousands of dugouts in which the Japanese apparently intended to resist invasion, hill by hill, life for life; the soldiers were coming out of the hole, where they should have been safe, and blood was running from their heads, chests and backs. They were silent and dazed.

Under what seemed to be a local dust cloud, the day grew darker and darker.

Hydrogen Bomb Is Within Realm of Possibility

BY JACOB SACKS

An excerpt from "The Atom at Work," by Jacob Sacks. Ronald Press Co. Copyright 1951.

TERRIBLE as is the atomic bomb, it may still not be the last word in destructiveness. It is within the realm of possibility that man may be able to create a far more powerful weapon out of the energy of the atom.

The President of the United States has made public the news that this country is working on the hydrogen bomb, and it would be the height of folly to suppose that the nuclear physicists of Russia are not doing the same thing.

The hydrogen bomb depends on nuclear fusion, rather than fission, for the release of energy. It operates on the same type of process that is going on in the sun and the stars: the condensation of hydrogen to helium.

The reaction involving only the light isotope, either through the carbon cycle as it takes place in the sun, or directly, as it is supposed to happen in certain of the stars, is extremely slow even at temperatures of millions of degrees. But as soon as one of the heavier isotopes, deuterium or tritium, enters the picture, the reaction speeds up enormously.

When only these heavy isotopes are involved, the speed of the process changes from the snail's pace to that of lightning. According to the calculations of the theoretical physicists, these reactions should begin to take place when the temperature is 15,000 degrees centigrade, but only slowly. As the temperature is raised to several million degrees, the speed increases enormously, so that it would take less than a millionth of a second.

For the weight of material involved, the energy liberated in fusion is much greater than in fission. When U235 or plutonium undergoes fission, only about one-tenth of one percent of the mass is converted to energy, but in the fusion reaction involving either deuterium or tritium alone, or the one in which they both take part, up to seven tenths of one percent of the mass is converted to energy.

There are neutrons liberated in the fusion reactions, but there is no way for these neutrons to keep a chain reaction going. There would be no shortage of materials for a fusion bomb, since deuterium is an article of commerce and tritium can be produced readily in the nuclear reactor.

The difference in the power for destruction of the two bombs does not stop with the greater energy release from fusion. The critical size is the "practical" upper limit for the fission bomb, as well as the lower. That is, it is pointless to put more U235 or plutonium in a single bomb assembly than just enough over critical size to make sure it will go off. In a larger mass the explosion would be less efficient than that which would take place when a small fraction had undergone fission.

But there is no limit, so far as is known, to the amount of *fusionable* material that can be put in one assembly. So long as the mass of exploding material remains at that enormously high temperature, it is possible for the fusion reaction to keep going.

So it is conceivable that a hydrogen bomb could be made with a hundred times the capacity for destruction of those dropped on Hiroshima and Nagasaki, or the "improved" ones tested at Bikini and Eniwetok.

How could such a bomb be set off? How is it possible to reach the terrifically high temperature necessary? There is only one way on earth to do it: to use an "ordinary" uranium or plutonium bomb as the trigger.

At the instant of the explosion of the fission bomb, the temperature within the mass is probably several million degrees, and any deuterium or tritium there would undergo the fusion reaction, raising still higher the temperature and pouring out vast amounts of energy to add to the enormous forces for destruction.

At this writing, we do not know whether the hydrogen bomb is possible. We know only that it is being worked on.

What of the Future?

BY NORBERT WIENER

An excerpt from "The Atomic Era—Can It Bring Peace and Abundance?" edited by Freda Kirchwey. Medill McBride Co. Copyright 1950.

WHAT has happened is that we have discovered a considerable number of new intellectual and experimental tools for handling the atomic nucleus. Some time may come when these exploratory tools may be used to the limit, and yield nothing new. Nobody is ready to believe that this time has yet come. We are in a situation analagous to that of the liquefaction of gases toward the end of the last century. Then each liquefaction of a new gas rendered possible the liquefaction of a more refractory one.

That sequence of discoveries and techniques did indeed come to an end, and that end was permanently obtained by the liquefaction of helium—the most refractory of all gases. In other words, it came to an end only when it could go no further.

Under these circumstances, it is sheer folly to estimate the social consequences of atomic physics on the strength of what we can knowingly accomplish with the present atomic bombs. The first group of bombs, those of Hiroshima and Nagasaki, numbered their dead in tens of thousands.

The experiments of Bikini made it clear that even these primitive bombs might have vastly increased their total kill if they had been used to inundate a maritime city with a spray of poison water instead of being used for the sake of a detonation well above the surface of the earth.

After Bikini, there was a period during which the experts estimated from 100 to 1000 to be the number of bombs needed so to poison the atmosphere that a permanent effect was to be expected on the whole heredity of the human race. There have been various revisions of this estimate, and it is quite possible that it is too small.

The new hydrogen bomb has so far displayed its power only in estimates, but its sheer power to scorch and burn appears to be of the order of 1000 of the Hiroshima bomb. It seems possible that it may be so used that its poisoning of the atmosphere is of far less relative importance than that of the uranium or the plutonium bomb. Note well, however, the precise words of this statement: "it may be so used."

It seems equally clear that if it succeeds at all, and most atomic physicists estimate that it will succeed, it may also "be so used" in connection with metallic powders and dust, that its poisoning power is quite on a par with its searing power. If this is so, we are but one step or a step and a half from a weapon which may well give the coup de grace to the whole human race.

Nagasaki: A Big Strong Wind Came . . .

BY TAKASHI NAGAI

Reprinted from "We of Nagasaki," by Takashi Nagai. Duell, Sloan & Pearce. Copyright, 1951, by Duell, Sloan & Pearce, Inc.

ALL of a sudden there was a great big flash, like lightning. I didn't know what it was—I was so surprised! Then there was a big noise, then a big strong wind came and pushed me. I was scared. I got on the floor and stayed there with my hands over my ears.

First I didn't dare to, but after a while I took my hands away from my ears and I couldn't hear the cicadas—they weren't chirping any more. Then I opened my eyes and got up and, oh, my!, what an awful thing I saw!

From the other side of the big green mountain there was a great big red thing like a tree sticking up into the sky. It was a big, big tree made out of fire. The top of it kept opening and opening and it looked as if it was alive. It kept swelling and swelling and it went up and up, higher and higher, like smoke from a chimney, all the way up to the sky, and then it kept going up even higher, right past the sky. First it was all red, but it began to be different colors—oh, so bright! It made my eyes hurt! I kept watching it, and after a while the colors weren't so bright any more, then the whole thing turned grayish and spread all over the sky.

Just then my brother came running up the hill from the river without any clothes on. He was all excited and he said, "My goodness! What was that? That plane must have crashed into the sun!"

Sure enough, the sun wasn't shining—I looked up at it through the awful cloud and it was the color of a dead thing.

Everything got dark, almost as dark as night, and cold, too, and pieces of burnt paper kept falling down out of the sky. Brother took hold of my hand and took me behind the sasanqua tree in back of the house. There were lots of pretty strawberries all around; they were nice and ripe, but we didn't feel like eating any.

We could see lots of black smoke going up on the other side of the mountain, from under where the cloud was. Makoto said the cloud was over Urakami. He said "Urakami's been hit!" The two of us stood there watching over the top of the mountain . . .

Then it began to rain and the raindrops were big and greasy. They made dark spots on my dress, and the taro leaves were covered all over with greasy drops sticking to them. We were afraid of such a funny kind of rain, so we went back indoors.

. . . BY WITNESSES AND SCIENTISTS

An Analysis Of A-Bomb Casualties

BY ANSLEY J. COALE

An excerpt from "The Problem of Reducing Vulnerability to Atomic Bombs," by Ansley J. Coale. Princeton University Press. Copyright 1947.

IT IS difficult to separate the casualties caused by blast from those resulting from other causes. The *direct* effect of blast on humans may have been negligible compared to other causes. It has been estimated that lung damage from blast would not extend much beyond 1200 feet (as compared with 50 feet for a 2-ton blockbuster).

Most blast casualties were a result of building collapse, flying glass and debris, and burns inflicted by secondary fires which were started as a result of blast, these fires being particularly tragic because of the people trapped by debris.

Flash burns were estimated by the Strategic Bombing Survey to have caused 20 to 30 percent of the total number of deaths. Since radiant heat travels just as light does, people in "shadow" at the time of the explosion escaped exposure.

"Persons reported feeling heat on their skins up to 24,000 feet. Burns of unprotected skin certainly occurred up to 12-13,000 feet, and reportedly up to 15,000 feet . . . nearly three miles. Serious or third-degree burns were suffered by those directly exposed within 4500 feet, and occasionally as remote as 7200 feet. In the immediate area of ground zero, the heat charred corpses beyond recognition.

"Clothing as well as buildings afforded considerable protection against the flash. Even a clump of grass or tree leaf was on occasion adequate.

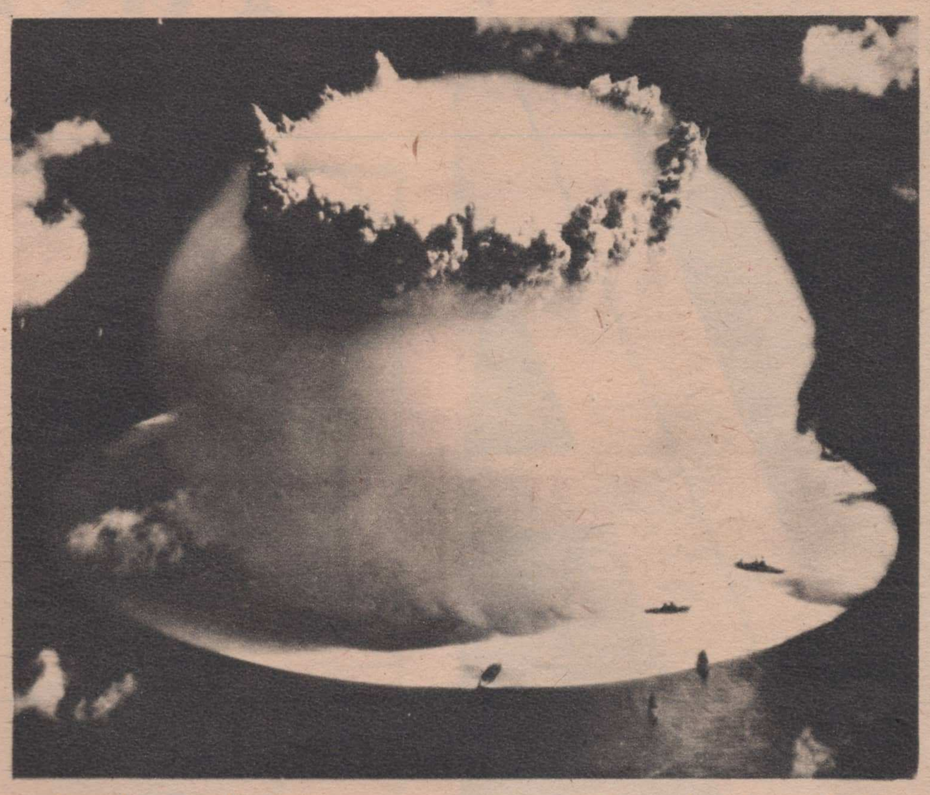
"The implication clearly is that the duration of the flash was less than the time required for the grass or leaf to shrivel. While an accurate estimate is not possible, the duration could hardly have exceeded a fraction of a second."

Many who were sheltered from direct exposure to the radiant heat of the bomb, and who escaped fatal injury from fire and debris, succumbed within a few days or weeks to the effects of gamma rays. Those close to the bomb became ill within two or three days, suffered from bloody diarrhea and expired within a week.

The majority of radiation cases at a greater distance showed no severe symptoms until one to four weeks after the explosion . . .

Penetrating radiation also had an effect on reproduction. Sperm counts of males within 5000 feet were reduced, with some cases of complete aspermia for as long as three months. All known pregnant women within 3000 feet of ground zero had miscarriages.

"Two months after the explosion, the city's total incidence of miscarriages, abortions, and premature births was 27 percent as compared with a normal 6 percent." (Not all of these effects can be attributed to radiation.)



Luminous dome of water, steam and smoke rises high above the lagoon at Bikini during the 1946 test blast.

Effects of Radiation

BY DAVID BRADLEY

Reprinted from "No Place to Hide," by David Bradley. Little, Brown & Co. Copyright 1948.

1. A radioactive particle or ray in passing through a medium, be it gaseous or solid, has numerous collisions with atoms of that medium and leaves behind it a wake of ionized fragments.

It is these ions, positively and negatively charged particles, which are detected by the Geiger-Muller counters.

The capacity of a radioactive particle to ionize depends upon its size and electrical charge and speed. Over a given distance of track a slower-moving particle will make more hits and cause greater ionization, but of course over the total track the faster-moving particle, having more energy, will have more ionizing power . . .

A neutron, having large mass, no charge, and traveling at enormous speeds, will cause considerable stir over a great distance. The great damage from neutrons, however, is not so much from the primary ionization, as from the ionizing power of innumerable fragments of atoms left in its wake.

2. The damage done in living tissue by the passage of radioactive particles or rays is a result of the ionization produced. If enough atoms are ionized, the molecule, as part of a living mechanism, is destroyed. If enough molecules are injured the cell is destroyed. If enough cells are injured, the living mechanism cannot survive.

3. Bacteria fight according to the Marquis of Queensberry rules. With them it is direct invasion of the organism by means of well-accepted weapons such as toxins. With radioactivity it is the impersonal and mathematical production of ionization, against which the body has no defense.

Bikini: Fireball Rose at 100 M. P. H.

BY W. A. SHURCLIFF

An excerpt from "Bombs at Bikini," prepared under the direction of the commander Joint Task Force One by W. A. Shurcliff. Wm. H. Wise & Co. Copyright 1947.

THE mushroom, now the common symbol of the atomic age, was far more spectacular than any still photograph can suggest. Its height and statuesque beauty were impressive; but even more impressive was the speed of its writhing, upward surge.

The speed of its ascent is understandable enough. When the bomb exploded, white hot gases instantly spread and filled a region about one-third of a mile in diameter. But these gases were very thin; their aggregate weight was extremely slight—about the same, in fact, as the weight of a hydrogen-filled balloon of equal diameter. Now a hydrogen-filled balloon of this fantastic size would have enough lift to raise *thousands* of *tons*. Such, then, was the magnitude of the buoyant force urging the fireball upward.

The fireball rose initially at a rate of more than one hundred miles per hour. Within twenty seconds it transformed itself into the fireless head of the mushroom, now one mile high. Two minutes later the mushroom's altitude was five miles; five minutes later it was seven miles, one mile higher than Mt. Everest.

As the mushroom head rose at express-train speed, it sucked air in beneath it. Scooped up in this turbulent trailing festoon, called the stem, were soot from the stacks of the nearer target vessels, smoke from the flash-burned decks and equipment, and water vapor.

(The mushroom contained also various unusual gases created by the bomb's ionizing radiations. These radiations were partially absorbed by the nitrogen and oxygen molecules of the air and the result was: nitrogen molecules were broken up into individual nitrogen atoms; and the oxygen molecules were broken into individual oxygen atoms. When the unmated nitrogen and oxygen atoms collided, they immediately joined to form molecules containing oxygen and nitrogen together. Such molecules have an apricot color, and traces of this color were clearly visible in the A-Day mushroom.)

The mushroom head broadened as it rose; eventually it attained a width of nearly two miles. The air rising in the mushroom head became cooler as it rose and expanded; air pushed upward just above the mushroom head was cooled also. This cooling resulted, of course, in condensation.

A remarkable phenomenon occurred: a thin white cap or scarf cloud appeared lying just above the mushroom top and cleanly separated from it. It is probable, although not certain, that this consisted not of water droplets, but of very small ice crystals. Such an ice-cap, never before produced by man, can only form when the meteorological conditions are exactly right.

The mushroom did no damage, but it was far more fearsome than its soft white form could suggest.

In it were shrouded the bomb's deadly fission products . . .

The amount of radioactive fission products infesting the cloud was small in terms of weight. But its potency was impressive, being temporarily equivalent to hundreds of tons of radium. (The world's total supply of concentrated radium amounts to only a few pounds.)

Inquirer Best Seller List

This chart is compiled from reports supplied to The Inquirer by 20 representative bookshops in the Philadelphia area.

Fiction

1—THE DISENCHANTED. *By Budd Schulberg*
2—JOY STREET. *By Frances Parkinson Keyes*
3—THE CARDINAL. *By Henry Morton Robinson*
4—DON CAMILLO. *By Giovanni Guareschi*
5—RIVER OF THE SUN. *By James Ramsey Ullman*
6—THE DISAPPEARANCE. *By Philip Wylie*
7—THE BALANCE WHEEL. *By Taylor Caldwell*
8—SON OF A HUNDRED KINGS. *By Thomas B. Costain*
9—THE ADVENTURER. *By Mika Waltari*
10—RIVERS PARTING. *By Shirley Barker*

General

1—KON-TIKI. *By Thor Heyerdahl*
2—BOSWELL'S LONDON JOURNAL, 1762-1763
3—LOOK YOUNGER, LIVE LONGER. *By Gayelord Hauser*
4—OUT OF THIS WORLD. *By Lowell Thomas, Jr.*
5—FALL OF PRACTICALLY EVERYBODY. *By Will Cuppy*
6—COURTROOM. *By Quentin Reynolds*
7—HINGE OF FATE. *By Winston Churchill*
8—ROMMEL, THE DESERT FOX. *By Desmond Young*
9—THE WORLD ALMANAC
10—EAST OF HOME. *By Santha Rama Rau*

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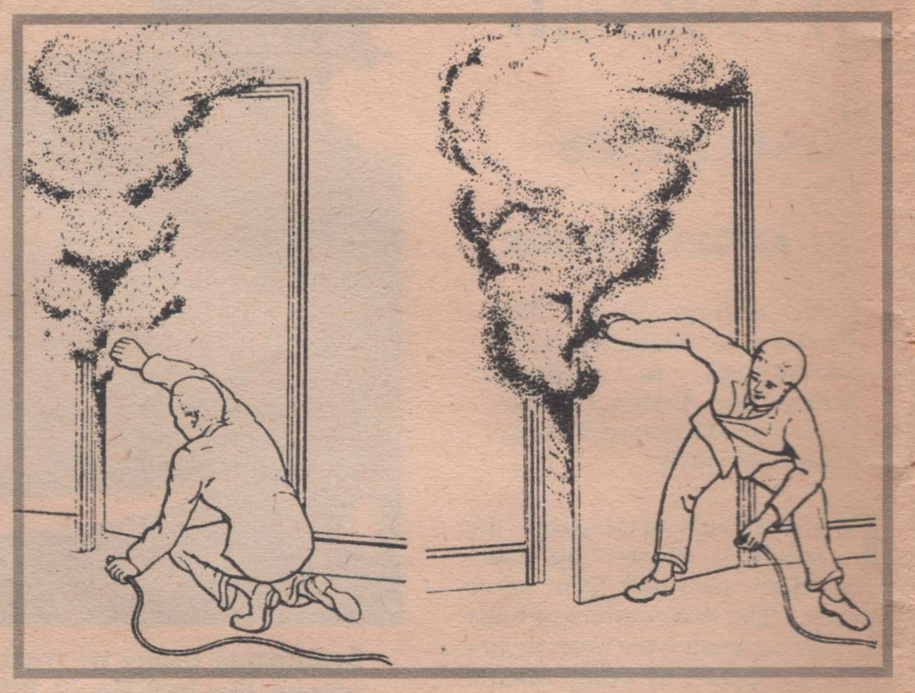
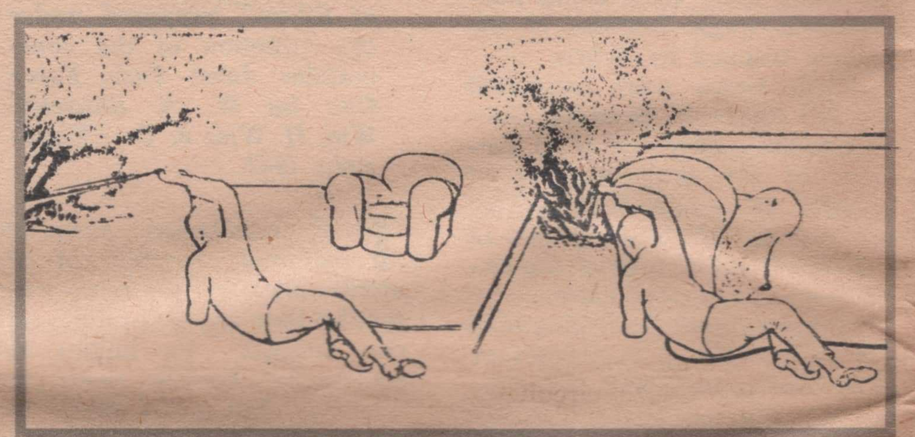
Fire! Fire!

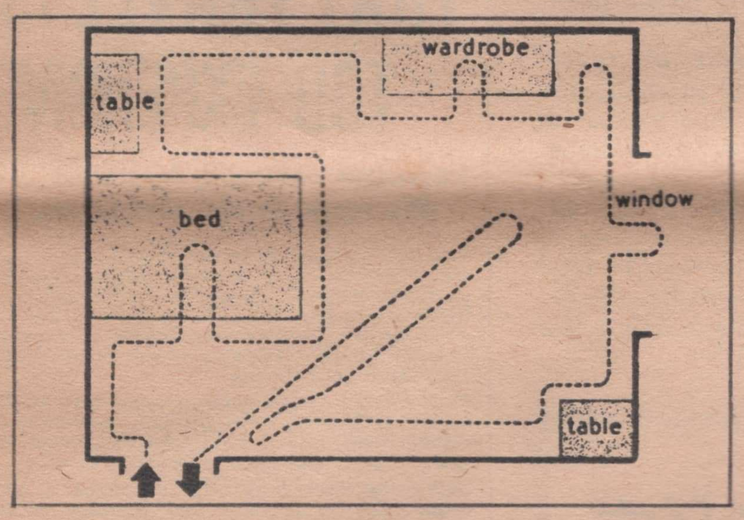
If your attic looks like this it constitutes a fire hazard, air raid or not. Keep house free of burnable trash.



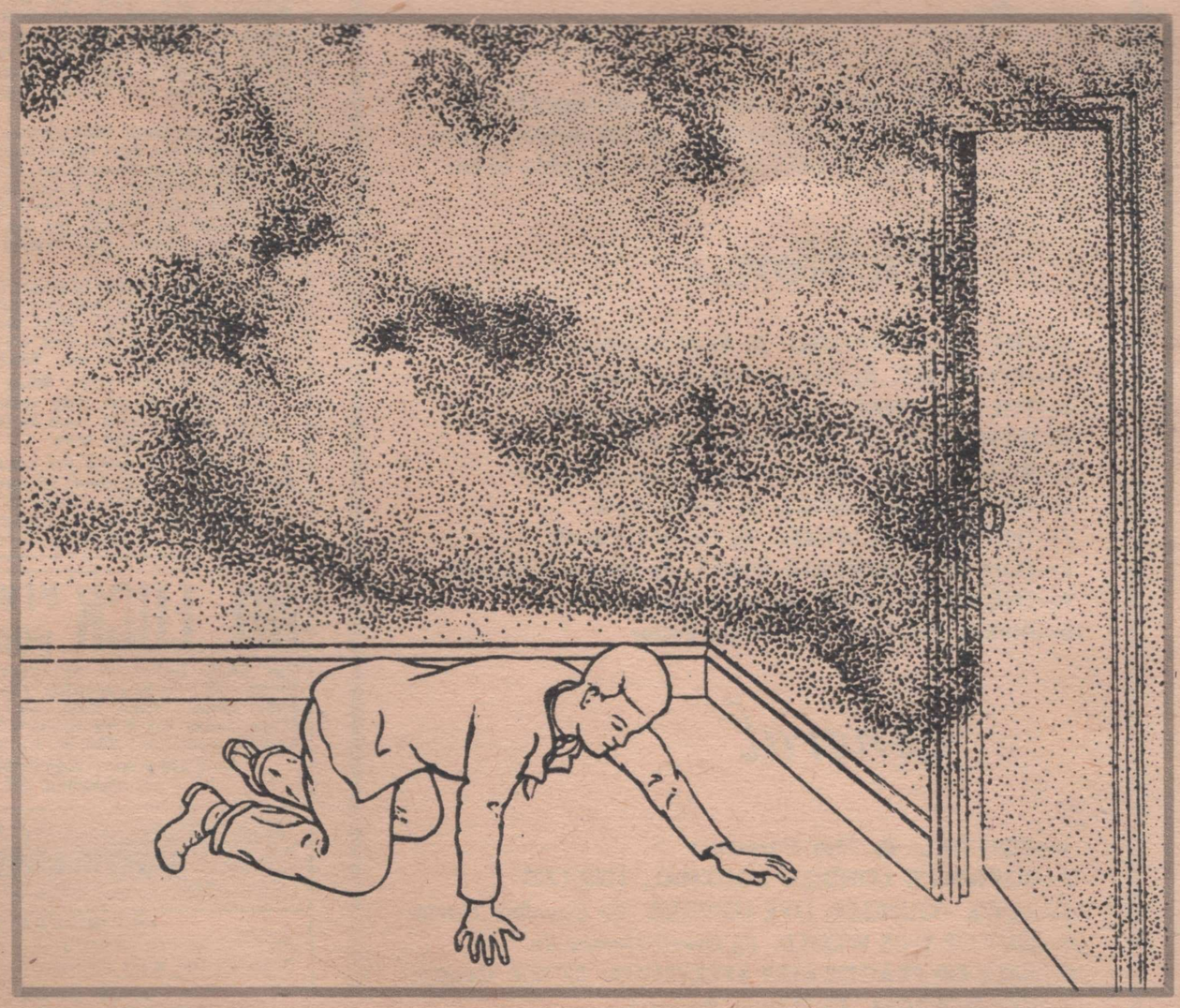
When opening a door behind which fire may be found, the possibility of a back draft of flame should not be overlooked. The most obvious warning of danger is the presence of heat. Crouch so that any released gases or flames pass over the head. Carry a stirrup pump for immediate application of water to fire. If door opens toward you, place foot against bottom of door and turn handle gently.



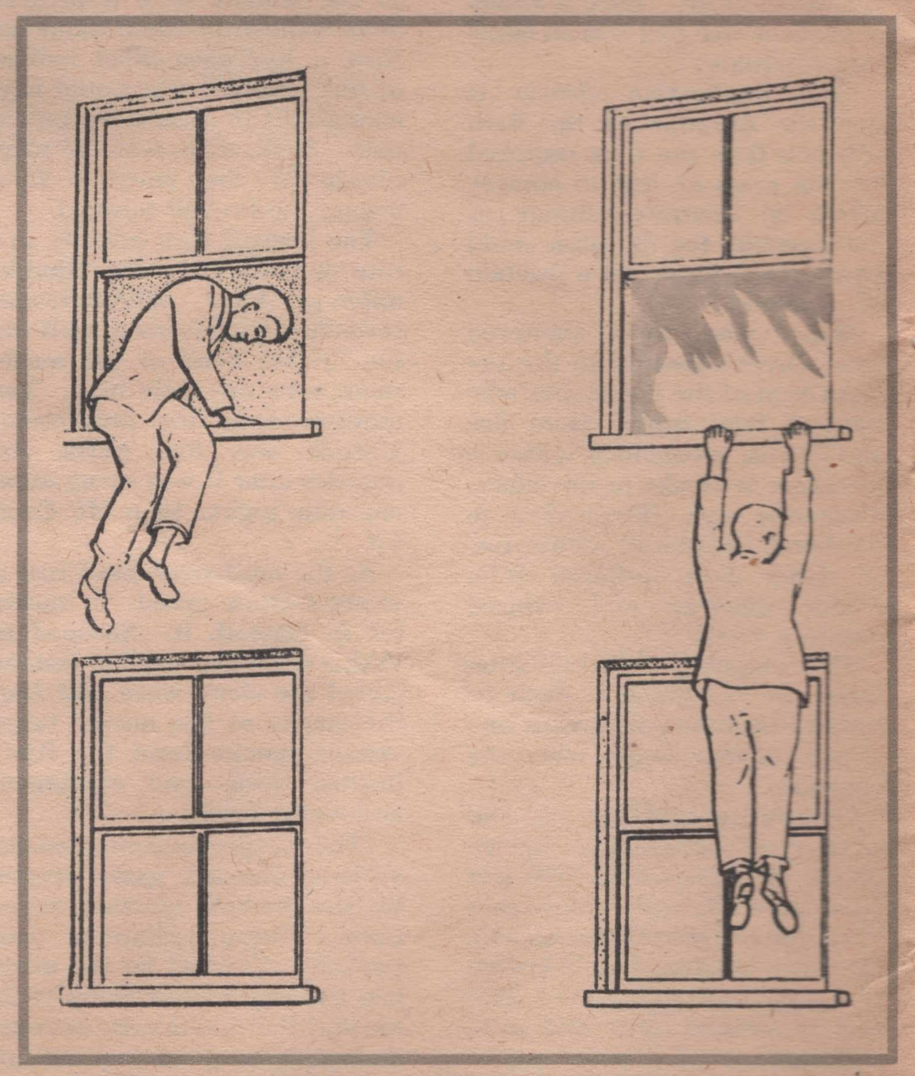
When tackling a fire caused by a magnesium incendiary bomb, the bomb will undoubtedly be the heart of the fire and should be attacked as such. A jet of water will cause spluttering of the magnesium and may start other fires. These bombs, too, may be fitted with explosive attachments. Therefore, when fighting a fire caused by magnesium bombs take full advantage of any available cover against splinters.



Searching a smoke-filled room for anyone trapped requires a definite plan. Once inside the room a complete circuit should be made, keeping close to the wall, feeling under and on beds, inside wardrobes and other furniture. Finally, the room should be crossed diagonally to make sure that no one is lying in the center of the room.



When moving about in smoke in strange surroundings it may only be possible to work by touch. This calls for caution. The air will be coolest and clearest near the floor. In crawling forward, the free hand should be raised in front with the back uppermost to feel for obstructions. If the back of the hand touches a live electric wire the shock will throw the hand clear and will not cause it to clasp the wire as would occur if the hand were open.



It is often possible to escape by dropping from a window to a projecting roof and so reach the ground. To do this, sit on the window sill with legs outside, turn over, grip the sill and lower yourself to the full extent of your arms, then let go. In this way you reduce the distance by about seven feet.

FIRE!

Most Destructive Effect Of A-Bomb Will Be Fire

BY GRACE MADLEY

THE single most destructive agent in any bombing raid is fire. In the explosion area of an atomic bomb, temperatures rise to many thousands of degrees, and the heat flash may set afire dry leaves or paper a mile away.

At the same time, the bomb's blast cracks fuel lines, crosses electric wires, and blows apart stoves and heaters. Broken water pipes also cut the chance of fighting fires.

No one can prevent all the fires from a bomb blast. But all can help to curb them.

Here's what you should do beforehand: Keep your house as free as possible from burnable rubbish. Put all paper trash in a large can, just as you would garbage, and be sure to get rid of it regularly. Don't pile raked up leaves near the outside of your house or garage. Keep your basement and attic as clear as possible; this will enable firemen to work more efficiently. If you must keep oily rags, put them in a metal container. Check all electric wiring and fixtures for loose connections, which may become short-circuited during a blast.

Try to get into the habit of keeping your bedroom doors closed at night. Fire and smoke tend to bypass a room with closed doors. Also, closed windows and doors throughout the house help cut down fire-feeding drafts. Don't keep inflammable liquids—cleaning fluids, paints, solvents—in bottles. Put them in metal containers; keep them tightly covered and, if possible, store them in a metal cabinet.

These general precautions are the same as those used against any type of fire. But, in fighting fires from bombs, the rules are different.

As George H. Kington, Fire Marshal in Philadelphia, points out, "Your fire may be one of hundreds. So instead of telephoning for aid, you may have to wait until fire-fighting units get around to you, in accordance with plans worked out in co-operation with the civilian defense organization."

Meanwhile, you should use your own modest fire-fighting equipment to try to put out small fires and control larger ones. To do this, you should have two buckets of water on each floor of your home, and keep them filled. The stirrup pumps and sand buckets of the last war still will be useful. Keep a hose hooked up to a convenient water outlet; if your water lines retain pressure, it may save your house.

Fire-Fighting Hints

DO . . .

1. **Break a panel near the lock if it is necessary to force a door.**
2. **Turn off gas at the main on entering. This will prevent an explosion.**
3. **Leave electricity "on" but if it is already "off," find out the reason before putting it on again.**
4. **Start at the top and work downward when searching a house.**
5. **Exclude oxygen by keeping doors and windows closed when possible.**
6. **Crawl, don't walk, when in thick smoke.**
7. **Keep near walls, where floors and stairs are strongest.**
8. **Attack fires at closest possible range.**
9. **Attack the heart of a fire.**
10. **Attack oil fires with sand, earth or foam.**
11. **Before leaving be sure that all fires are out.**
12. **Remember that phosphorus will re-ignite.**
13. **Keep all fire-fighting appliances in order.**
14. **Keep ample supplies of water. YOU CANNOT HAVE TOO MUCH.**

DON'T **go alone into a smoke-filled building except to save life.**

DON'T **enter a burning building or room, except to save life, without fire-fighting appliances.**

DON'T **play water on electric wiring.**

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Keep regular — take Serutan today — see how marvelous you feel when you are regular again. Money-back guarantee.

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Don't Be FAT!

Take R.D.X. Tablets before meals to help you curb your appetite. Between meals, R.D.X. Tablets help you stave off hunger. Reducing becomes more pleasant.

Ask your doctor about the wonderful new R.D.X. Tablets and Reducing Plan. R.D.X. Tablets contain *no harmful drugs.*

You do want to lose weight, don't you? Then buy a package of R.D.X. Tablets at your drugstore and follow the R.D.X. Reducing Plan.

Mother! **DO THIS FOR CHILDREN'S COLDS!**

At first sign of child's sneezing, stuffed up or "runny nose", give Histaline quick! Tests prove the antihistamine in Histaline *stops children's cold symptoms in 2 out of 3 cases!* Made in special dosage — safe for children — easy-to-take wild cherry flavored syrup. Get Histaline at your drugstore today! Money-back guarantee.

Fast Relief for ACHES PAINS

of Rheumatism
Neuritis
Sore Muscles
Chest Colds
Coughs Due to Colds

Rub in New Modern...

RUB A-535*

Eight out of every ten wrote—in a recent national survey—that they liked Rub A-535 better than any rub, liniment, or balm previously used.

Try Rub A-535 TODAY and let it help you, too!

...makes you feel better fast!

GET A 49¢ JAR OR GIANT 73¢ TUBE

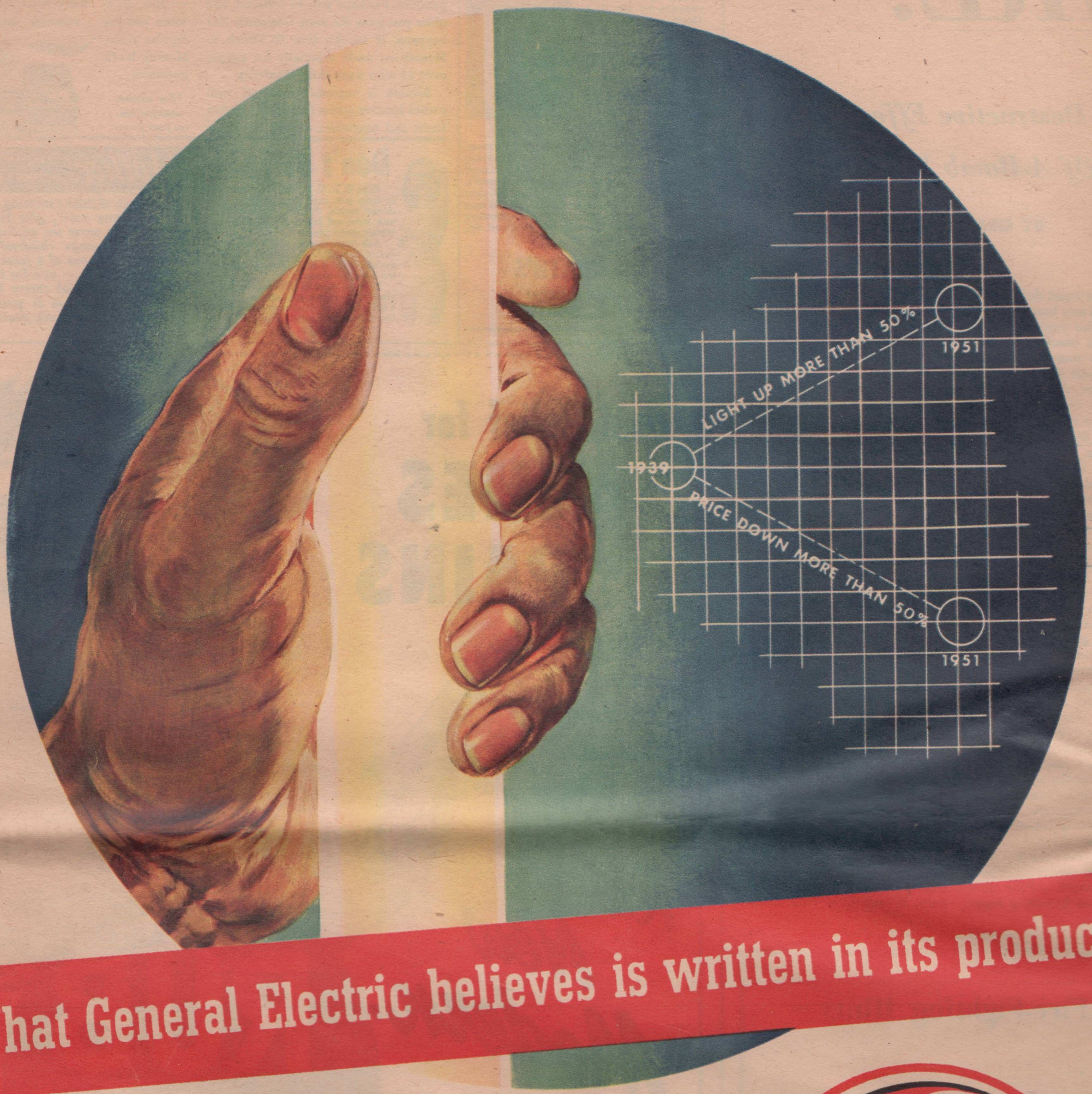
RUBS RIGHT IN
GOES RIGHT TO WORK
WON'T STAIN CLOTHING

Antiphlogistine
RUB A-535

On Sale at All...

Sun Ray Drugs

*®



What General Electric believes is written in its products

Remember the first fluorescent lamps? General Electric put them on the market more than 12 years ago. No lamps gave so much light for so little electricity. But we kept improving them as fast as we knew how, until today's lamp gives over 50% more light. And the price of the 40-watt, for example, which was introduced in 1939, has been brought down from $2.80 to $1.05. General Electric's aim is to improve its products, making them serve you even more faithfully.

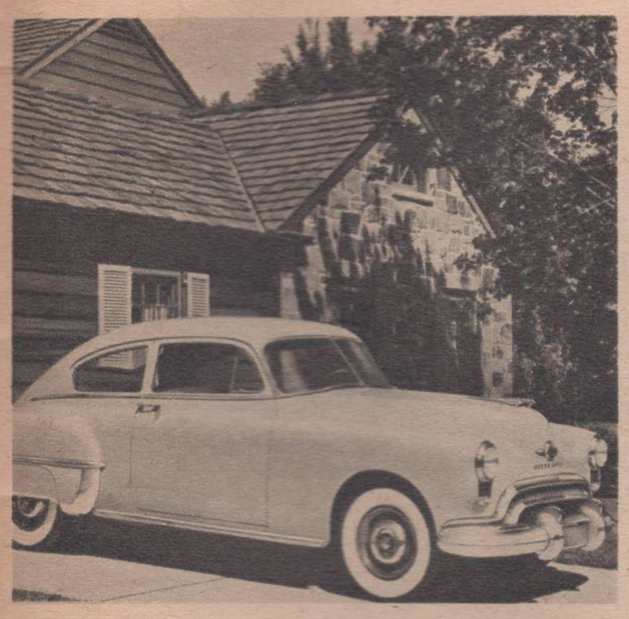
You can put your confidence in—

GENERAL ELECTRIC

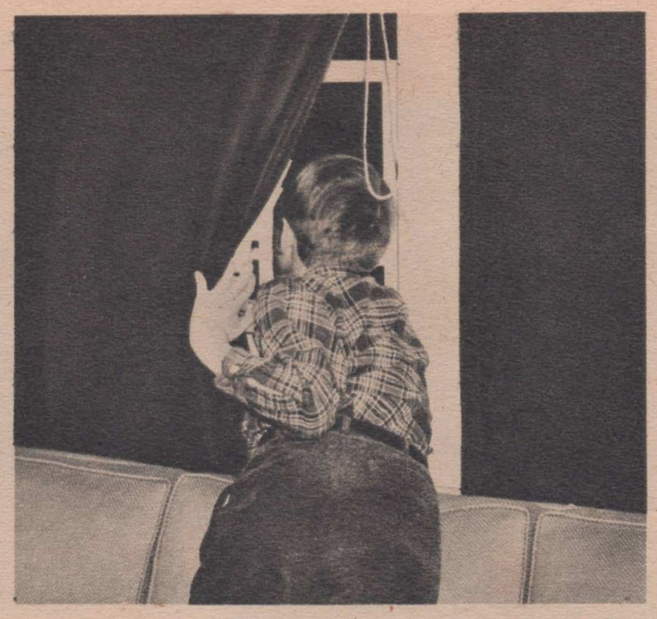
Picture Quiz

BY JOHN MILLER

If you have first carefully read the important contents of this issue, you will have no trouble in discovering which are the true and false statements given below these pictures. How many can you detect? See Page 55 for the answers.



1 Park your car outside your home for use in possible emergency following an atomic raid.



2 To avoid the flash of the bomb and flying glass, stay away from the windows when the alarm sounds.

3 Anyone who is touched by atomic rays is almost certain to become a victim of cancer.

4 Experience has shown that exposure to atomic rays will make one permanently bald.

5 Following warning of possible attack, never rush to door to see what's coming.

6 Radiation sickness affects animals in the same manner as human beings.

7 Familiarize yourself with the location of the main shut-off water valve.

8 By way of remaining calm, one may smoke following atomic attack.

9 The safest spot in the home in the event of attack is the cellar.

STOP!

Get soothing relief from

CHEST COLD PAINS and ACHES

with Antiphlogistine

POULTICE HEAT

Nothing feels better than a good hot ANTIPHLOGISTINE Poultice when you've got one of those miserable chest colds and that tightness and cough that usually go with it. Apply ANTIPHLOGISTINE Poultice comfortably hot and then feel its soothing Poultice Heat go right to work on your chest cold pains and aches.

You'll agree "It feels wonderful."

Antiphlogistine Poultice

(Pronounced Anti-flo-jiss-teen)

Get a can or tube at any drugstore today

LET IT HELP YOU, TOO!

Why FORCE your child to take a Laxative?

Extra Mild—Contains No Harsh Drugs—Won't Upset Sensitive Little Stomachs!

When your child needs a laxative, *never* upset him with harsh adult preparations. Give Fletcher's Castoria, the natural laxative especially made for children from *nature's own* vegetable products. Contains no cascara, no castor oil, no salts, and no harsh drugs. Won't cause griping, diarrhea, nor upset sensitive digestive systems. Mild Fletcher's Castoria acts gently, thoroughly, and you can regulate dosage *exactly*. What's more, it's so pleasant-tasting, children take it without fussing. Get it now.

Tastes So Good. CHILDREN Lick the Spoon!

Chas. H. Fletcher

The Original and Genuine

CASTORIA

Especially Made for Infants and Children of *All* Ages!

Making a Home

Basement window protected inside by top-hinged plywood shutter. Ladder fixed to wall provides emergency exit.

As protection against rapid spread of fire, exposed lumber in basement can be covered by gypsum board, which will also make basement more pleasant.

Rinso WHITE

Rinso BRIGHT

ONLY Rinso HAS SOLIUM

TO MAKE YOUR WASH

WHITER, BRIGHTER THAN NEW

YES IT'S TRUE! MY SHEETS ARE WHITER NOW THAN THE DAY I BOUGHT THEM

MOM SAYS MY COLORED DRESSES ARE BRIGHTER NOW THAN WHEN THEY CAME FROM THE STORE

RAINY WASHDAYS DON'T BOTHER ME ... RINSO PUTS SUNSHINE IN MY WASH EVEN WHEN IT'S DRIED INDOORS

Another fine product of Lever Brothers Company

No other soap gets your clothes so WHITE... so BRIGHT because no other soap contains SOLIUM

Yes, only Rinso has Solium to put sunshine in your wash... even on rainy days!

Imagine it! Even if you dry clothes INDOORS, Rinso puts sunshine in your wash. No other soap can get your wash so white—so bright—because no other soap contains the scientific Sunlight ingredient, Solium.

Get Rinso with Solium. So safe for clothes. So kind to hands.

RINSO GETS OUT MORE DIRT than any other type of washday product

Shelter

BY RALPH TREVES

It Can Be a Simple Project Or an Elaborate Production— Without Wasting Critical Materials

THE safest haven for your family in the event of an enemy air attack is the basement of your own home.

In arranging a basement refuge, the first step is to select a suitable portion of the cellar, not too large, then partition it off and do everything possible to brace the walls and ceiling, cover exposed foundation wall areas, guard the exits, and minimize as much as possible the dangers from other hazards such as shattered glass, bomb fragments, fire and atomic flash.

In the following shelter suggestions, consideration is given to minimum interference with everyday peacetime use; materials are those not needed for the national military defense; protective measures are not in themselves structural changes which may be destructive of property value when the emergency is ended.

Effective Protection

Government and military engineers, after intensive study of raid damage during the last war and considerable scientific experimentation, report that a sub-surface reinforced concrete wall, 8 inches thick, offers effective resistance to explosion of a heavy bomb as close as 30 feet. Even if the foundation of your dwelling is not of reinforced concrete, it is bolstered with a barrier of packed earth which is equal to a wall thickness of many feet in a surface structure.

But what about the overhead floors which may be wrecked by a blast? Take comfort in the fact that the upper stories never fall flat into their cellar; the limited resistance of the small dwelling to wind velocity results in "crumpling" of a destroyed super-structure, as you may have observed in pictures of bombed houses. The tangled mass arches above the foundation, providing protective layers of material.

The greatest dangers in any buried shelter are those from fire and flying debris. There is no way to make the shelter room tenable for any considerable length of time if there is a large fire. The ceiling should be made fire retardant with plaster or iron sheets for maximum protection and to give ample time for escape.

The "crumple" factor is the chief reason why, in selecting the shelter area, it is questionable that the section should be where there is little overhead covering, such as under a porch extension. For this reason also, do not include an open stairway in the refuge.

Unless you can count on installing a concrete slab at least 6 inches thick over such an area, it will be best to locate the refuge under the main structure of the house, preferably arranged to encompass an outside exit and one window.

When you have selected the room area, draw a floor plan of the entire cellar, as this will help you to schedule the work.

There is no intention here to indicate extensive bomb-proofing, whose requirements would involve engineering problems; rather the point is to take simple steps to make the cellar refuge as safe as possible against the effects of a bomb or atomic blast.

The suggestions presented here are for an individual family shelter in a one- or two-family house, for use by four to eight people.

Cinder Block Inside Wall

The first step is to partition off the room. Probably the easiest means for doing this, and at the same time brace the ceiling, is to erect an inside wall of concrete or cinder blocks. These come in standard size, 8" x 8" x 16" long, so a wall 9 feet long will require only 6 blocks for each course, with spacing for mortar joints. Such a wall is fireproof, easy to erect with inexpensive material, provides good structural support for overhead beams.

If the floor is of concrete in good condition, the blocks can be laid directly on it, using a mortar bond, without need for a footing. The first course of blocks should be laid out so the corner blocks just fit against the side walls. For the next

(Continued on Page 51)

ADVANTAGES OF INDIVIDUAL BASEMENT SHELTER

1—Avoids necessity of running to public shelter.

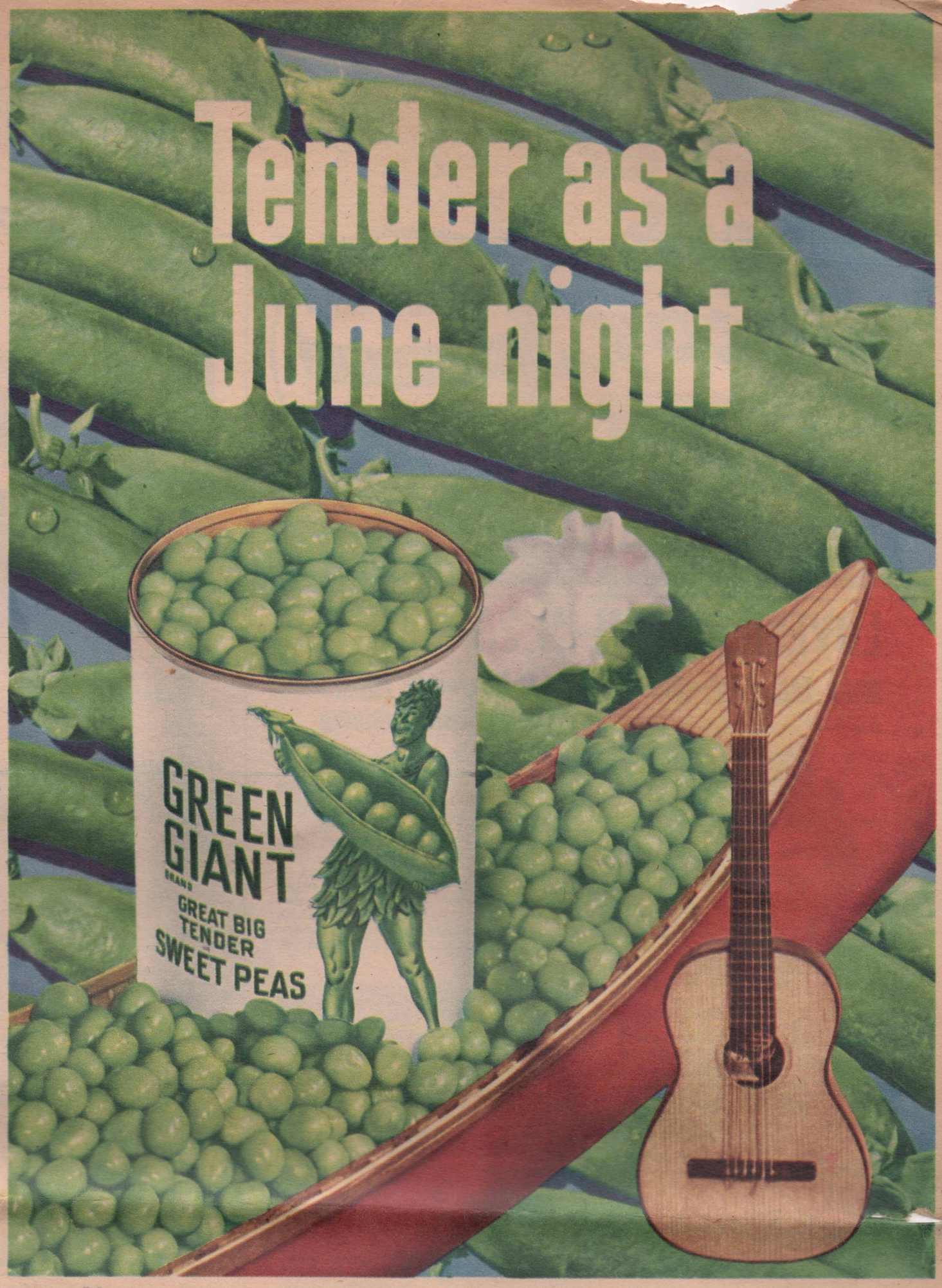
2—Keeps family unit together.

3—Better accommodations for lengthy alert.

4—Avoids entering crowds.

5—Eases burden of authorities.

6—Just as safe.

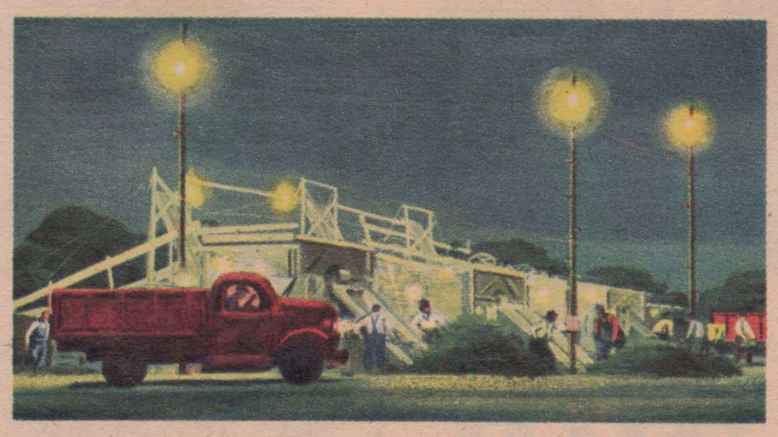


Our artist had this fancy idea for showing you how tender our peas are. If you've eaten 'em, you already know.

But what you probably don't know is how our peas get that way. One reason is this—our peas get to a good size when they're still babies in tenderness.

Now, peas are tricky. They come to their peak on a certain hour of a single growing day. Pick them at that moment and even an ordinary pea tastes pretty good. The thing about Green Giant Brand peas is that they are all picked at that "fleeting moment of perfect flavor."

Better peas to start with, watched over by us like a mother hen, we catch 'em at the one high moment of their sweet and tender lives. No better eating anywhere.



Harvested in the Moonlight. The call may come at midnight or at dawn. "The field's ready!" Whatever the time, the Green Giant's crew must do a fireman's act. Less than three hours after the peas reach their "fleeting moment," they're picked and packed, vine-fresh.

Green Giant Peas

BRAND

Green Giant Company, headquarters, Le Sueur, Minnesota; Fine Foods of Canada, Ltd., Tecumseh, Ontario.

"Green Giant" Brand Reg. U. S. Pat. Off. © GGCo.

Dental Research Indicates You Can Help

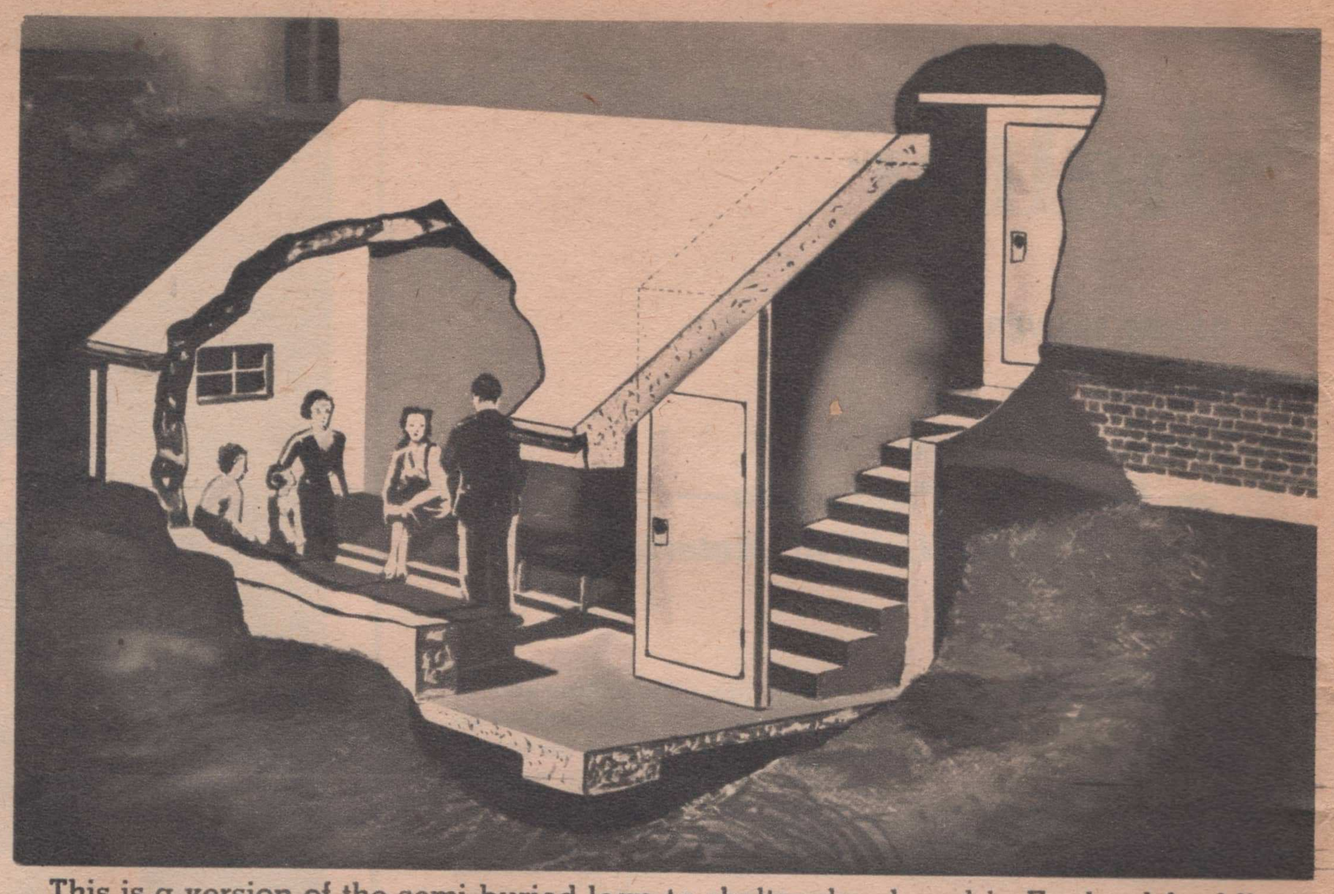
Prevent Tooth Decay with

Colgate's ammoniated formula gives "extra protection", helps neutralize destructive mouth acids when used regularly as directed. Removes dulling film. Cleans your breath as it cleans your teeth. Get Colgate Ammoniated Tooth Powder today!

4oz. 47¢ 2oz. 27¢

REPLACEMENT OR A REFUND OF MONEY ★ Guaranteed by Good Housekeeping IF NOT AS ADVERTISED THEREIN

With A Flavor The Whole Family Will Enjoy



This is a version of the semi-buried lean-to shelter developed in England for blitz protection. Roof has a 6-inch-thick concrete slab, walls are of 8-inch concrete, doors of metal. Sharp slope deflects bomb fragments and debris.

LOVELIER SKIN IN 20 MINUTES

Make This Test—See and Feel it Happen to YOUR Skin 20 Minutes After Applying

Cleanse one-half your face with your present cleansing cream. Cleanse the other half with sensational new Lanolin Plus Anti-Dry Skin Cleansing Cream. This half will feel *very much* softer and smoother to your touch and you will need no other make-up base for the day. Lanolin Plus Anti-Dry Skin Cleansing Cream is different from all other cleansers in that it abundantly restores lubricating cholesterols and esters to your skin instead of leaving your skin depleted of them as the result of cleansing. It is the *ONLY* cream your skin needs and you will have NO MORE DRY SKIN as long as you use it regularly. All department and drug stores have it. $1 plus tax for a large jar.

Use Ordinary Cleansing Cream on one side . . . Feel your skin.

Smooth Lanolin Plus Anti-Dry Skin Cleansing Cream on the other side. Feel how much smoother it makes your skin.

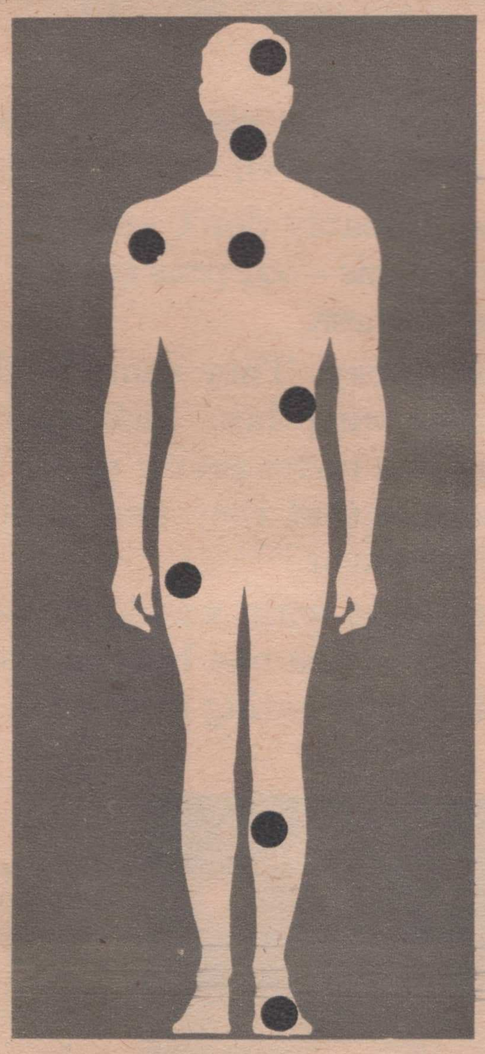
Lanolin Plus ANTI-DRY SKIN CLEANSING CREAM

Bunk against wall has storage space below. Window has inside shutter made of plywood.

Sandpile is good line of defense. It is useful for sandbags, mixing mortar and filling firepails.

Where do you hurt today?

- **Muscular aches?**
- **Chest cold?**
- **Stuffy head?**
- **Muscular back ache?**
- **Simple headache?**
- **Rheumatic muscular pain?**
- **Tired feet?**



Get wonderful relief—"on-the-spot" relief *quick* . . . with new, improved Minit-Rub!

New, improved Minit-Rub contains a quick-acting combination of pain-relieving ingredients. Here's what happens when you rub Minit-Rub on an aching spot:

1. Stimulates circulation, helps relieve soreness.

2. Its counter-irritant effect helps soothe local inflammation.

No mess! No clothes staining! Minit-Rub is *greaseless*—disappears like vanishing cream.

Don't be unprepared when pain strikes! Get a tube of new, improved Minit-Rub today!

Get "On-the-Spot" relief—quick—with

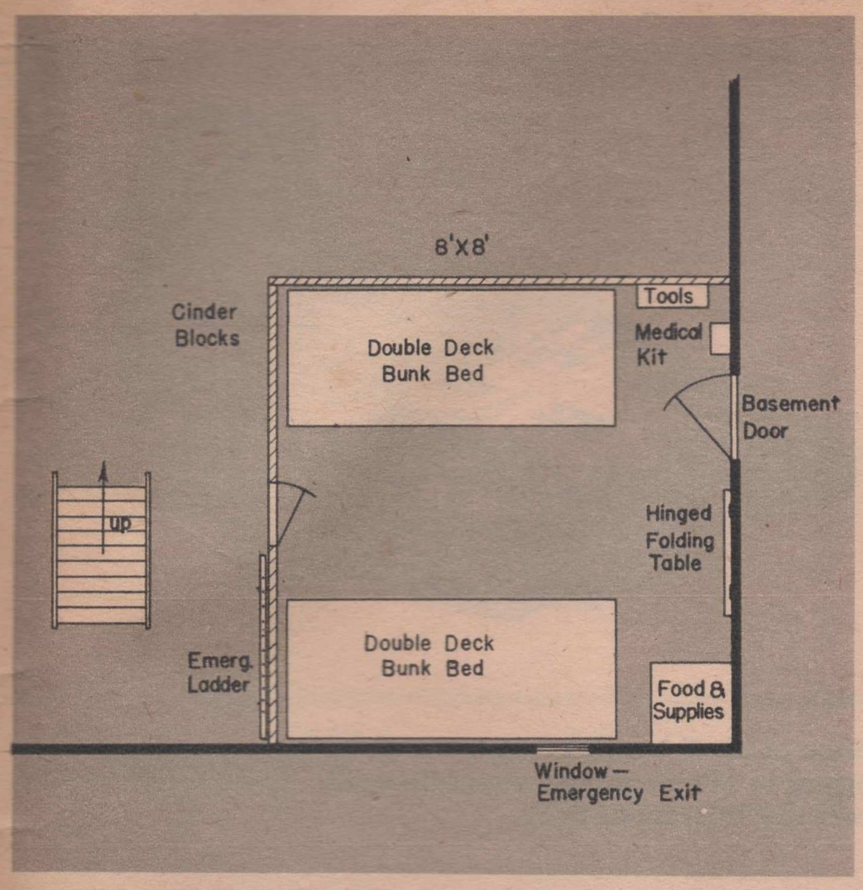
New Improved **MINIT-RUB**

FAST PAIN RELIEF MINIT-RUB PRODUCT OF BRISTOL-MYERS 35¢ ECONOMY SIZE 60¢

GREASELESS... disappears like vanishing cream

Old pail, with bottom knocked out and with wire hooks added, speeds job of filling sandbags.

New timber is expensive, hard to get. Old lumber can be salvaged and used for shelter-building.



Basic plan for a basement-corner bomb shelter involving construction of two cinder-block walls and bunks to accommodate four persons.

Bomb Shelter: *CONTINUED*

course, use half blocks at each end so the positions of the joints are staggered in each row. If necessary at the top, lay a plank of required thickness to fill a space narrower than 4 inches.

For mixing the mortar in small batches, make a box of scrap lumber, about 3 feet by 4 feet in size. Use the proportion of 1 bag of cement, 6 cubic feet of screened sand and 20 pounds of hydrated lime.

Sand is a basic material for the raid protection project, as it serves three essential services: for mortar in concrete-block walls; to fill sandbags; and for use in fire pails.

One of the first things you should do is order a load of 4 or 6 cubic yards of sand. Sand is purchased from local building supply firms, which deliver it in dump trucks.

Facts About Sandbags

Sandbags are very heavy to tote around, so they should be filled at the point where they will be used. Bags are expensive and may be difficult to buy in sufficient quantity. If necessary, use burlap potato sacks or flour bags, or you can sew your own.

Paper sacks will not do, as they break open and spill when wet. Even burlap and canvas bags have short life when exposed to the weather—generally about six months—so if possible cover sandbag abutments with canvas.

Another way to set off the room instead of erecting a semi-permanent concrete block wall is to put up several posts of as heavy lumber as you can find, at least 4" x 6", with T braces across the top in contact with the ceiling beams. If you have no heavy lumber, join four 2 x 4s with spikes and steel bands, or use a log from which bark has been removed.

Install Posts Solidly

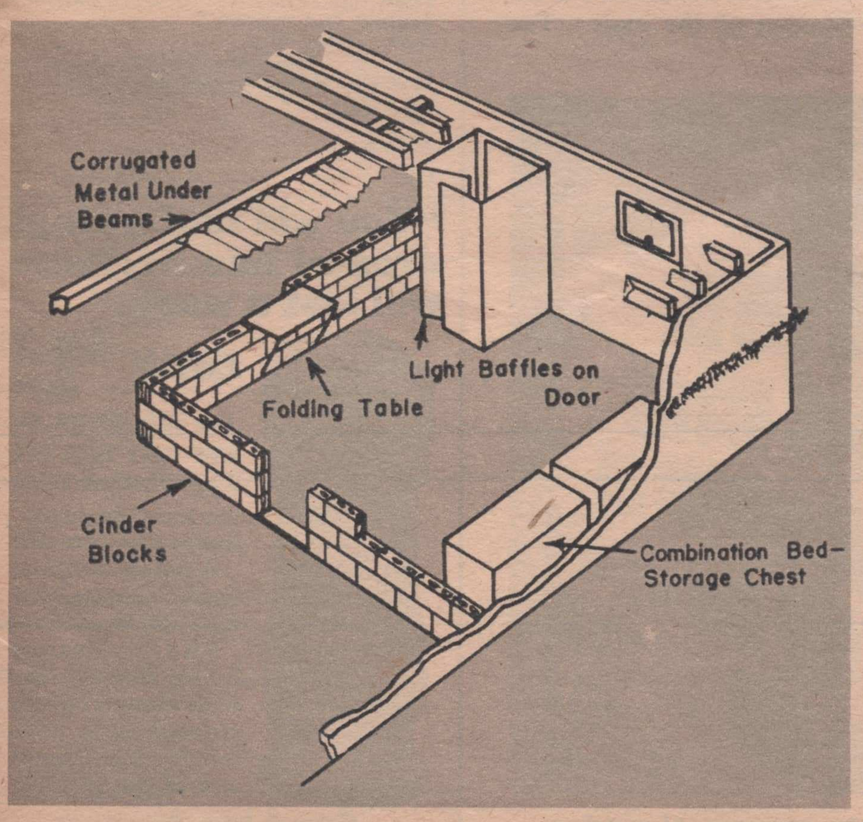
When putting up the posts, it will be necessary to shim up the bottom by driving wedges as shown in the illustration, so the post is solidly in place. It will do no good if the basement floor is of only a thin layer of concrete; in this case, lay a lateral beam on the floor first to act as a footing.

A gypsum board surfacing will make the room more comfortable and fire-resistant. Cover ceiling beams with corrugated iron, or at least gypsum board.

An important point to study is that of the exits. If you have a door leading directly outside from the basement, this exit should be covered as a protection against falling debris so the doorway will be kept clear.

Erect a solid shed over the

(Continued on Next Page)



Cinder-block walls partition off section which includes outside exit protected with light baffle as protection against atomic flash.

Not a shadow of a doubt—

You're carried along with a new and wonderful freedom. You've found a way to outdistance "certain" cares because the flat, pressed ends of Kotex prevent revealing outlines. And you're ever so *comfortable,* too—because the new Kotex is made to stay soft while you wear it. Gives you a new, downy *softness that holds its shape.*

Just two of all the welcome features you depend on—and find only in the new, softer Kotex.

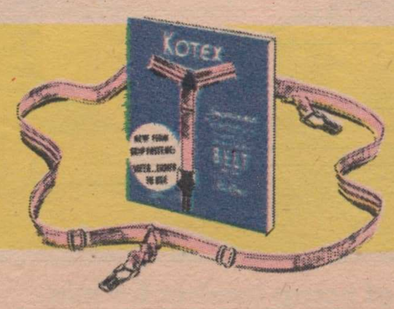
Kotex comes in 3 absorbencies—(3 sizes)—for different women, different days. So you may choose what's best for *you.* All 3 have the special safety center which Kotex alone provides, for your extra protection.

Super Kotex in the Brown Box—extra absorbency for more-than-average needs.

Junior Kotex in the Green Box—for women who prefer a slightly narrower napkin.

Regular Kotex in the Blue Box—perfectly suited to the needs of most women.

More women choose KOTEX than all other sanitary napkins



To assure extra comfort buy a new Kotex sanitary belt. Made with soft-stretch elastic—strong, lightweight. Non-twisting—non-curling. Stays flat even after many washings. *Dries* pronto! Why not buy two—for a *change?*

KOTEX IS A REGISTERED TRADE MARK OF THE INTERNATIONAL CELLUCOTTON PRODUCTS COMPANY

Fast, Effective Help for
HEADACHE

BROMO-SELTZER EFFERVESCES INSTANTLY... READY TO GO TO WORK FASTER THAN ANY TABLET PRODUCT I'VE EVER TRIED

Fight Headache 3 ways fast with Bromo-Seltzer and get really effective pain relief!

1. **Relieves headache pain.**
2. **Neutralizes excess stomach acidity.**
3. **Quiets jittery, jumpy nerves.**

For best results, use cold water. Follow the label, avoid excessive use. You must be satisfied or your money back. Get Bromo-Seltzer at your druggist's today. A product of Emerson Drug Co.

BROMO-SELTZER

Lipstick TABU

laden with the *"forbidden" fragrance*

Dress your lips in the perfumed excitement of fabulous TABU. Luscious smooth lipstick TABU comes in nine "forbidden" reds: SINGAPORE . . . sparkling true red. HAVANA . . . exotic red whispering of blue. NASSAU . . . red with rose undertone. BARCELONA . . . vivacious red. BOLIVIA . . . dark, daring red. RIO . . . laden with fuchsia. HONOLULU . . . perfect with your navies and black. ARGENTINE . . . sultry deep red. BERMUDA . . . light red. $1.50, plus tax, in 24 karat gold plated case. Refills available.

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The Same Hair Scientists Who First Introduced The Home Permanent Wave Kit Have Just

DISCOVERED NEW SHAMPOO CURLS AND WAVES HAIR

Without Permanent Waving

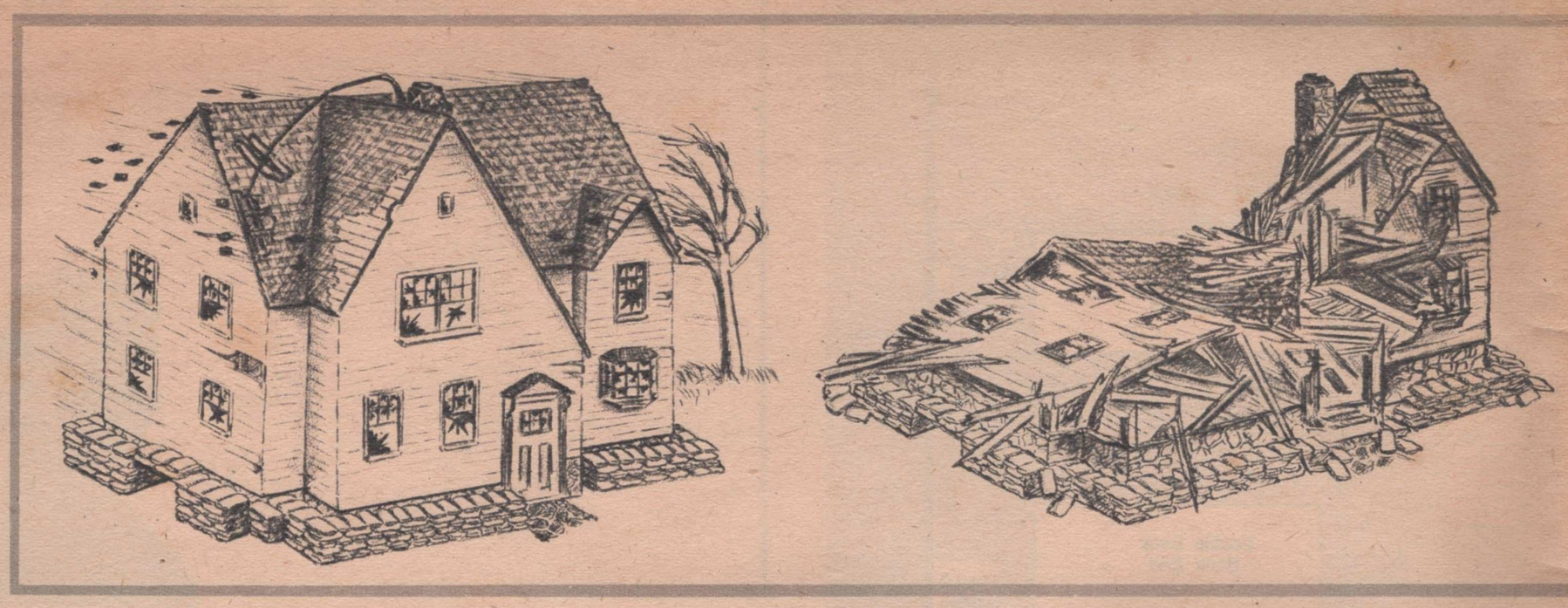
It's the Cream Shampoo That Makes The Difference!

Marlene's Hair Waving Cream Shampoo

NO MACHINERY... NO WAITING... NOT A WAVE SET!

This exciting, new, easy SHAMPOO actually gives soft, natural-looking, long lasting curls and waves, right while you wash your hair . . . yes, while you shampoo out dirt, dust, excess oils and loose dandruff, you shampoo-in personalized waves and curls that suit you best . . . a halo of soft ringlets or a loose, natural-looking casual wave. Marlene's Hair-Waving Shampoo is an entirely new principle that's as easy and simple as shampooing your hair, but the waves and curls stay in. No worry about split ends, no dry, brittle, fuzzy hair, no conditioner, no special shampoo. It's all in one . . . and one jar gives you and your family as many as 15 shampoos. Only $1 plus tax. Ask at toiletrie counters for Marlene's New Hair Waving Shampoo.

AT DRUG STORES EVERYWHERE



Your home wasn't built to take the pressure-suction sequence of an A-bomb burst, even as far as two miles away. But the basement is protected with yards of packed earth, equal to the strongest concrete wall. Even when upper stories collapse, the tangled mass crumples into an arch over the basement floor.

Bomb Shelter: *CONTINUED*

exit, extending at least 8 feet out from the door. Use closely placed lumber at least 2" x 6" in size for the uprights, and 2" thick lumber for the top of the shed covered with a sheet of corrugated iron. The sides of the exit shed should be protected with a double row of sandbags.

The emergency window exit also should be protected with a sandbagged shed, extending three or four feet from the outside wall. For constructing these protective sheds, consider the use of second-hand lumber if beams of desired size are not available. Generally, good solid lumber can be prepared just by removing all old spikes and nails with a pinchbar.

Protection From Glass

Proper attention must be given to protection from flying glass in the shelter room. Panes of glass in the exit door should be covered with plywood or composition board nailed over it on the inside. Glass windows should have a covering of wire mesh or hardware cloth, while the window opening must be fitted with a quickly closed wood or metal shutter.

In most houses, a portion of the foundation wall is above ground, and here is a critical element in reinforcing the refuge. This part of the wall must be protected with rows of sandbags to a height at least one foot above the sill, where the foundation wall ends.

Special hazards to contend with are flash burns and radiation from atomic blasts. In addition to shutters at all window openings, a light baffle at the entrance doorway will afford sufficient protection from atomic flash. This baffle represents a corridor with two offset panels, placed so that light flashes are deflected.

Atomic radiation is regarded as effectively blocked by solid walls and earth abutments. Experts today tend to minimize the effects of residue radiation following an interval of several minutes after an aerial atomic burst.

Important further details are the outfitting of the refuge with possibility of overnight, or extended, use in mind. Two or more bunks, with mattresses and blankets, can be placed against the walls. If the room will be used by a number of people, build double bunk beds. Below the bunks, and in separate storage closets, put in a cache of water, food, and special equipment which may be needed for fire-fighting or forcing an outlet. Change water weekly.

By all means, remove any unnecessary inflammable material such as window curtains, straw brooms and upholstered furniture. Built-in bunks, tables and benches should be painted with fire-retarding paint.

Providing an Exit

Where there is no exit from a basement leading directly outside, you would do well to think about putting one in. This improvement will provide additional convenience for everyday use as well as serve for emergency escape.

The project described in the sketches with this article involves excavating a trench alongside the foundation wall with a 45-degree slope to just above the footing. The wall is opened for the door frame; this is not very difficult if the wall is of stone or concrete blocks, but an opening in a poured concrete foundation wall should be done by professionals equipped with pneumatic drills.

The rest you can do yourself, by first casting the steps in concrete forms as shown, or laying pre-cast concrete risers and treads. A retaining wall of concrete block is erected opposite the foundation wall, and provision must be made for storm drain; this can be an iron pipe leading to a dry well.

The door sill should be placed several inches above the lowest step of the stair. The door jamb fits right below the house sill.

Give your house and basement a thorough going-over to spot all vulnerable points. Remember, your house was built only to withstand moderate wind velocity, so study and visualize the effects of strong ground shock. Anything you do to bolster your home will give your family that much greater insurance against an attack, if one comes.

EQUIPMENT FOR BASEMENT SHELTER

1—Flashlights.
2—Sandpails for fire.
3—Fire extinguisher.
4—Crowbar, shovel.
5—Bottled water supply.
6—Radio (battery-powered).
7—First-aid supplies.

Mail Order Shopping

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with this New Automatic 2-in-1

DATE & AMOUNT BANK

25c a Day Keeps Calendar Up to Date and Totals Amount Saved!

How would you like to turn spare quarters into hundreds of dollars for all the things you need? Most people never get around to saving, but the amazing BANCLOK actually forces you to save a quarter every day. For BANCLOK is not just an ordinary bank—it's a perpetual calendar, too. Unless you put in a quarter, the calendar won't move. What's more, BANCLOK also registers the total amount you save—and how it mounts up! BANCLOK is made of beautiful unbreakable plastic with guaranteed mechanism and key—get yours today! Prompt delivery!

Reg. $3.50
Now Only
1.98 PPD.
Save $1.52 on Each Bank!

10-Day Trial at Our Risk

MONEY BACK IF NOT DELIGHTED!

Mail This Coupon Today

LEECRAFT 282-P Albany Ave., Brooklyn 13, N. Y.

Please rush.....Date and Amount Banks postpaid. I am enclosing $.....in cash—check—money order.

.....Please ship C.O.D. I will pay postman $1.98 plus postage for each BANCLOK.

Print Name.....

Address.....

City.....Zone.....State.....

"You will find a single drop of this Perfume will last a week."

ONLY $1.00 prepaid

For This $2.00 Bottle

(ONE ONLY TO A PERSON)

Temptation — one of the most exquisite perfumes ever created.

A single drop lasts a week; charms, attracts men and women to you.

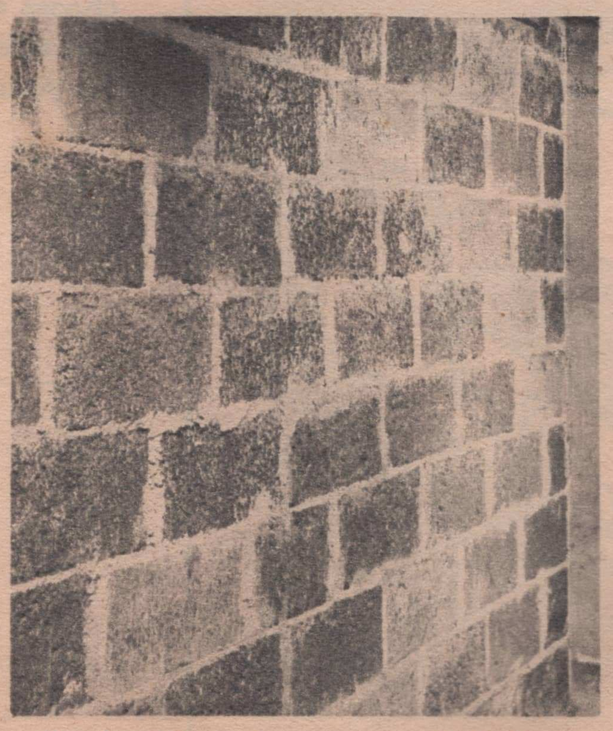
The fragrance of living flowers. Bottles with elongated stopper encased in a polished maple case 2 times the size of the picture.

Send No Money

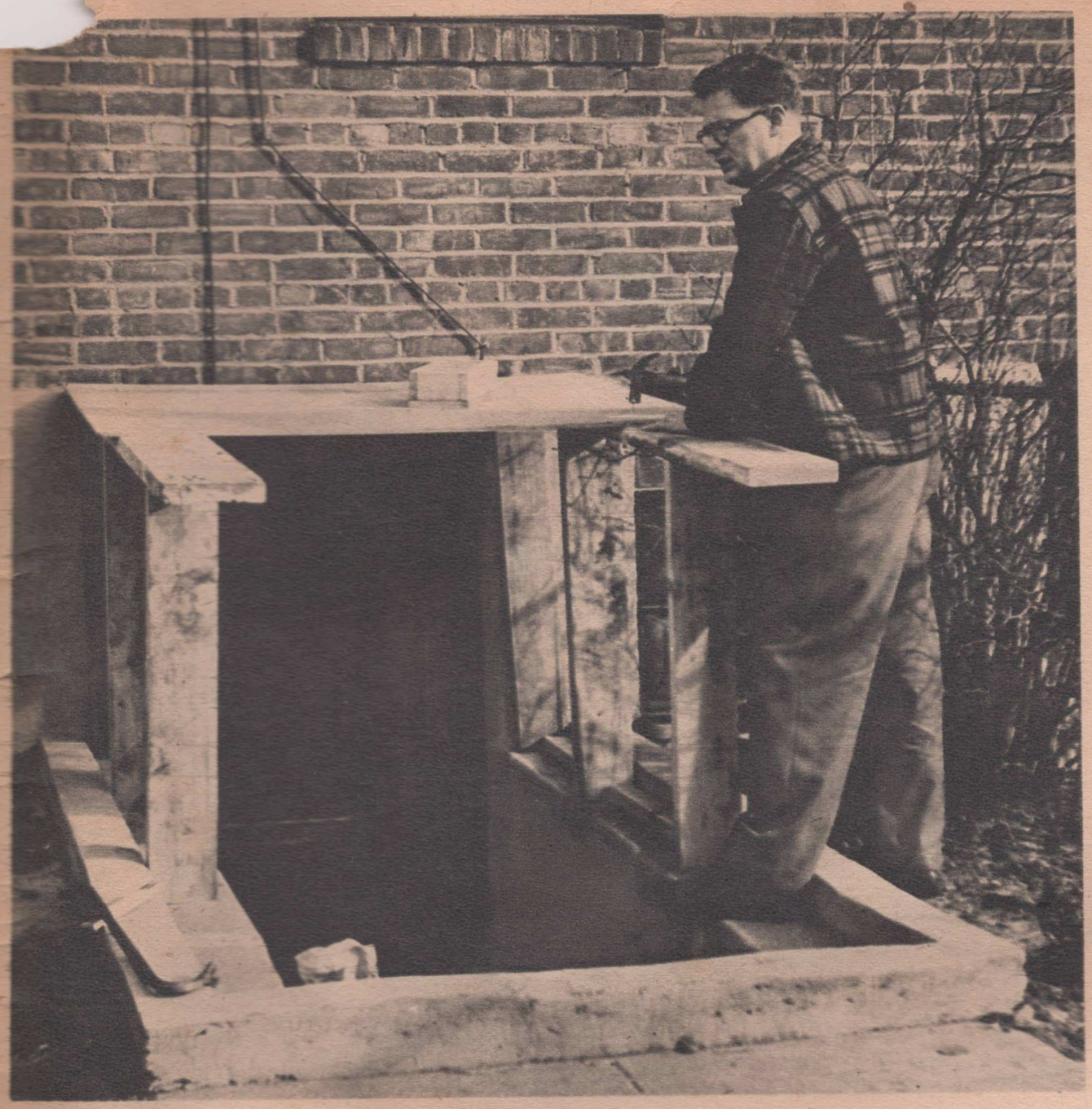
Pay the postman when he hands you the package or *(if you prefer)* send money order, currency, stamps or check for $1.00. In business 70 years. Money back if not satisfied.

PAUL RIEGER, 232 Art Center Bldg., San Francisco

Make a box of scrap lumber for mixing mortar to bond cinder-block basement partition wall. It prevents messing up lawn and driveway.

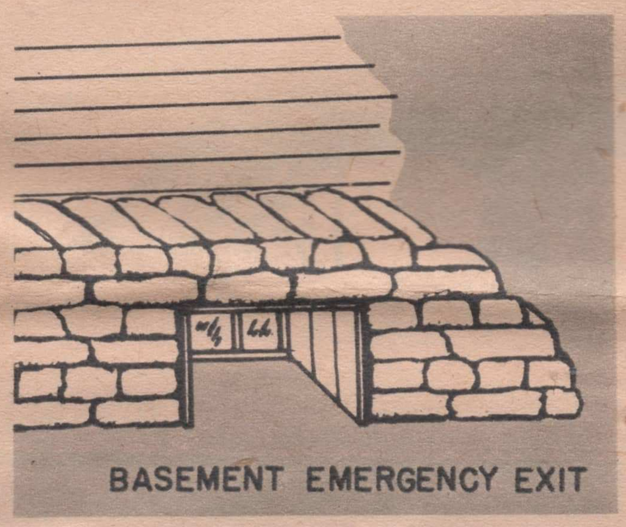


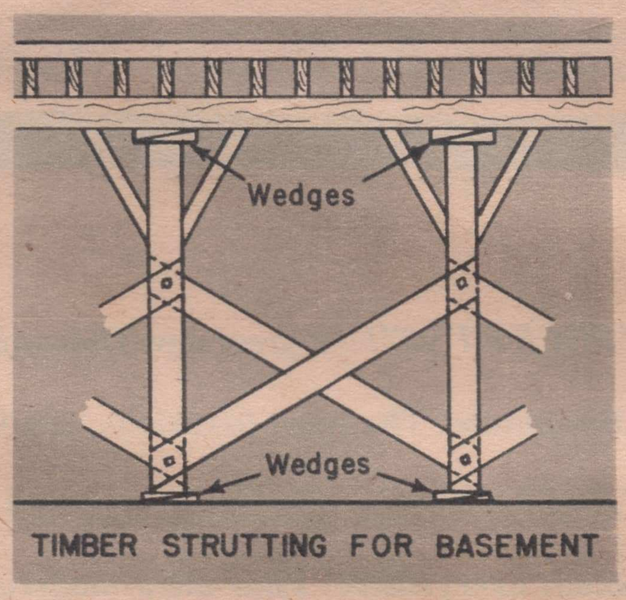
Begin alternate courses of cinder-block with half-blocks to give proper spacing of mortar joints. Standard block size: 8"x8"x16".



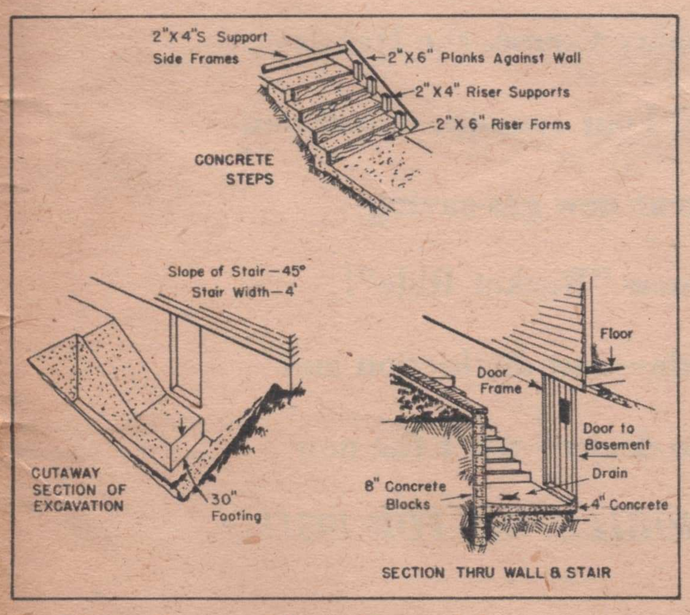
Reclaimed timbers are used for constructing shelter around cellar door. Sandbags are then piled over and around the wood-supported tunnel.

Curtains and all inflammable material should be removed from the shelter area and exposed wood covered with fire-retardant paint.





TIMBER STRUTTING FOR BASEMENT



Plans for outside stairs and basement exit door, with concrete block retaining wall and cast concrete steps. Do not excavate below house footing.

A completed basement exit project, with concrete block retaining wall capped by cement. Pre-cast concrete steps are available.

A YOUNG WIFE SHOULD BEWARE of this Grave Womanly Offense!

No other type liquid antiseptic-germicide tested for the douche is SO POWERFUL yet SAFE to tissues as ZONITE!

Failure to practice complete hygiene (including internal feminine cleanliness) may even result in ruining a girl's married happiness. Too often she simply doesn't know what to put in her fountain syringe.

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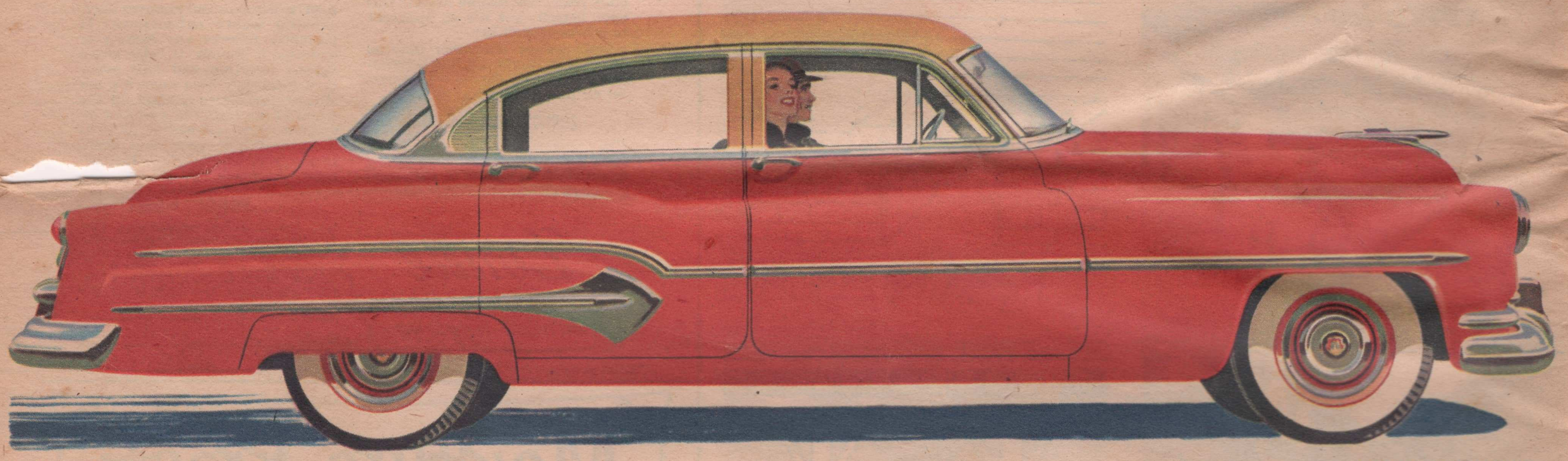

*Standard equipment, accessories, and trim illustrated are subject to change without notice. *Oldsmobile Hydra-Matic Drive optional at extra cost.*

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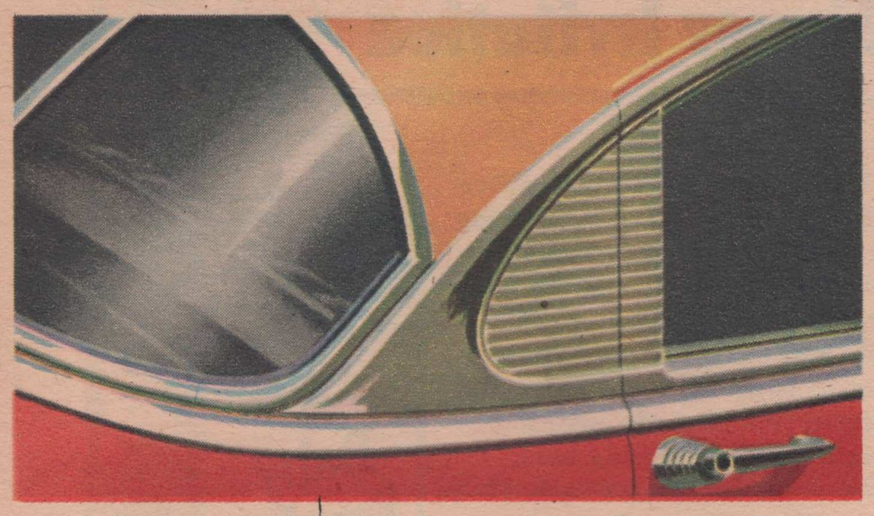

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A-Bomb Is Enemy's Best Bet

THERE are six types of weapons an enemy could use in attacking the mainland of the United States, other than by direct assault. They are:

1. High explosives of the conventional type.
2. Incendiaries.
3. Atom bombs or rockets with atomic warheads (not yet publicly stated to be feasible, but almost certainly under intensive study and research).
4. Chemical warfare—primarily, the lethal nerve gases.
5. Bacteriological or germ warfare.
6. Radiological warfare—the so-called "death dust" of highly radioactive, microscopic particles.

Saturation high explosive and incendiary raids, of the kind with which the U. S. Strategic Air Force and the Royal Air Force leveled the cities of Germany, are most unlikely. They require large fleets of aircraft which can operate effectively only when the raider has achieved air superiority. Such raids hardly could materialize over the United States unless the Continental Air Defense Command of the U. S. Air Force had been destroyed or driven from the skies.

As for chemical warfare, it was not until Dec. 27—not quite two months ago—that the Federal Civil Defense Administration, in the so-called "health services manual," lifted the curtain on the so-called nerve gases. Whether a potential enemy would be deterred from using poison gas by the same factors which restrained the combatants in the Second World War is debatable. Not enough information is yet available to discuss the problem intelligently.

Bacteriological warfare is a much more subtle type of attack, requiring specialized detection and a separate type of civil defense. The period of incubation of disease germs, atmospheric conditions, the density of distribution of the organisms, their disease-producing characteristics—all set germ warfare in a category apart from the line services of civil defense. An alert medical profession and public health service, an alert citizenry, backed up by a system of expert bacteriological laboratories, are the prerequisites to germ war defense.

The sixth possible type—radiological warfare—is not regarded officially as practical, and that view is expressed in two highly authoritative Federal manuals—*The Effects of Atomic Weapons* and *Health Services and Special Weapons Defense*. A civil defense force alert to the contamination caused by an atomic bomb can take radiological warfare in stride.

In brief, this explains why atomic weapons figure most prominently in all civil defense planning. At the moment, the atomic weapon, is *the* principal weapon of mass devastation.

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Answers to Picture Quiz

1. False. The best place to keep your car is in the garage, for its own protection, and to keep streets free for necessary traffic.

2. True. This boy is really looking for trouble because of the reasons stated.

3. False. In the five years following the atomic bombing of Nagasaki and Hiroshima, not one case of ray-caused cancer has occurred among the many thousands exposed.

4. False. Natives of Nagasaki and Hiroshima lost some of their hair temporarily. In no case did baldness remain.

5. True. At the warning sound of the siren, one should immediately retire to the chosen safety spot of the home.

6. True. If radiation dose isn't too great, an animal has a good chance of complete recovery.

7. True. But don't shut off water supply unless a leak or broken pipe occurs.

8. False. Don't risk the possibility of getting radioactive materials into your mouth via your hands or a "hot" cigarette.

9. True. The safest spot is on the lowest floor against an outer wall or base of a strong post.

Picture Credits

7, Inquirer; 9, Inquirer; 10, Inquirer; 12, 13, 14, 15, Inquirer; 16, 17, Army-Navy Task Force: 18, AP, Acme; 20, AP, Combine Photos; 27, Inquirer; 34, Acme; 36, 37, Inquirer; 38, 39, Metro; 40, AP; 43, Acme; 47, AP, Acme; 48, 49, 50, 51, 52, 53, Ralph Treves.

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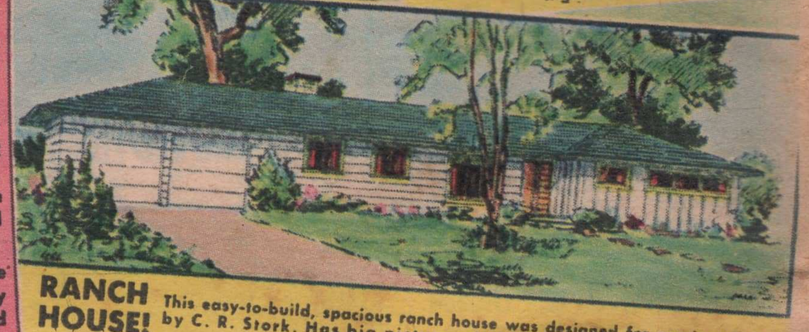

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